THE FRACTAL OF PI

by

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FORWARD

This is a special book. It contains the details of a fascinating original discovery about the nature of markets. This discovery did not come about by chance. I was looking for it. When the universe was ready, it let me see it. I feel very blessed for this opportunity. I share this discovery with the reader because that is what the plan of the universe says one must do. I strongly believe that when I am dead and gone, it will not matter how much money I made, but how many other fellow human beings that I helped along the way.

So I hope this course helps you along your market journey, and along your life's path. In it you will learn that we are all connected by and are part of one energy field. You will learn that this energy field operates by the Law of Harmony. My fond hope is that as you see this harmony in the markets, that you will translate that into a guide for living the other parts of your life.

May you prosper in harmony,

Dr. Allen L. Larson, d.b.a. Dr. Hans Hannula. 5/23/1997

Man's flight through life is sustained by the power of his knowledge.

Inscription on statue at the U. S. Airt Force Academy

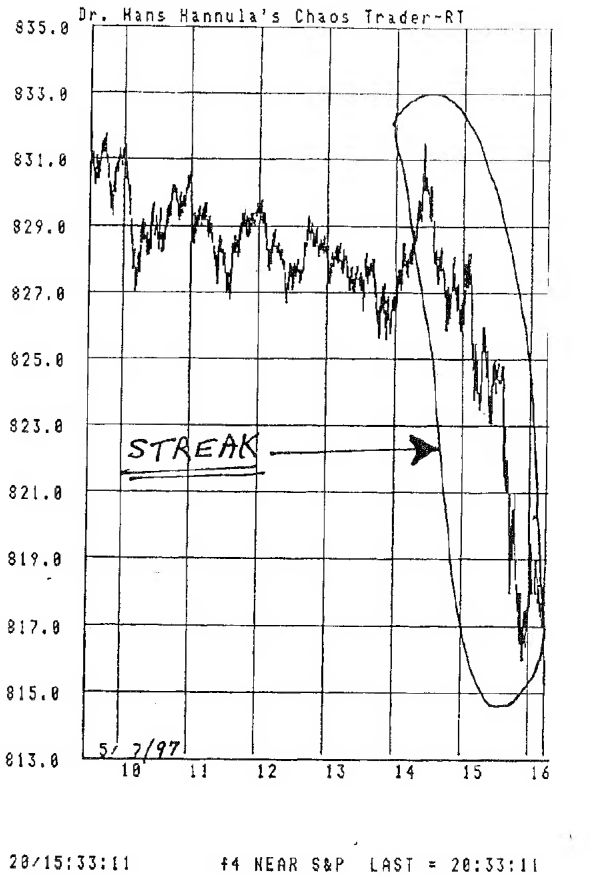
Table of Contents

There are several questions about streaks. When do they occur? Is there a pattern to

The Mystery of The Streaks

This is a course about a mystery-not an unsolved mystery, but a mystery solved. The mystery I speak of is the mystery of when markets will make those breathtaking chaotic streaks.

Streaks are those fast moves that seem to come out of nowhere and move markets large distances in a matter of hours. Figure 1 shows such a streak.



This is a chart of the S&P 500 futures contract on May 7, 1997. For the first four hours of trading the market was relatively flat, trading between 827 and 831. In the fifth hour it made a fast move up, retested the highs, and then dropped like a rock, falling from 832 to 816 in 1 1/2 hours. Obviously, this is the type of move that a trader would love to catch.

My work has focused on the search for the patterns of chaos. Markets are chaotic non-linear systems. As such, they product fractal patterns in their output, which is a chart of price versus time. The most basic of these patterns is the ***Chaos Clamshell***. A more highly developed form of the ***Chaos Clamshell*** is the ***Hannula Market Fractal***. It is taught in the ***Cash in on Chaos*** course, which is a prerequisite for this ***Fractal of Pi*** course. You should be familiar with both of those patterns. This course develops that pattern further into the ***Fractal of Pi***. Let us return now to the subject of streaks.

There are several questions about streaks. When do they occur? Is there a pattern to them? "How can I cash in on these streaks?"

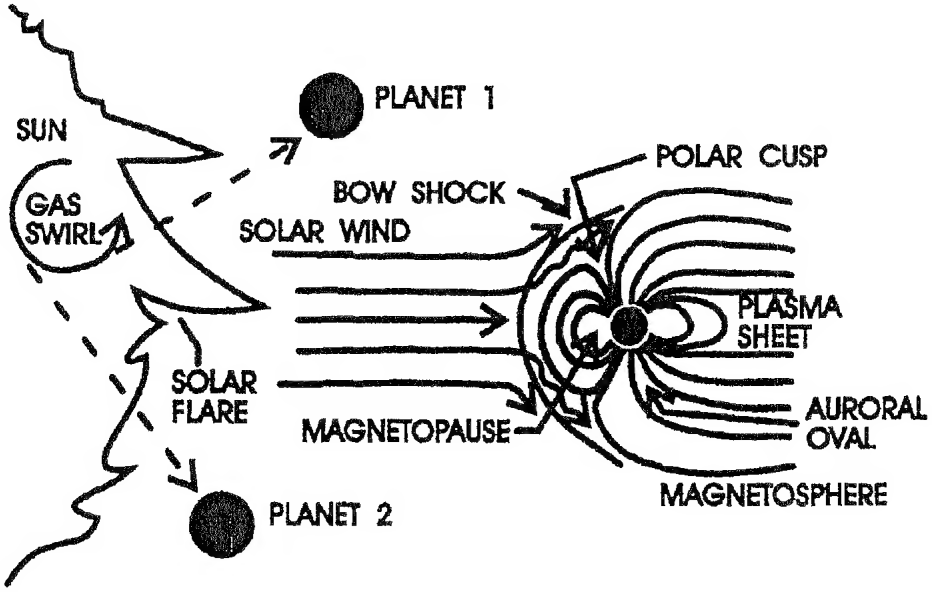
We will develop the answers to these questions in the next few chapters. We will examine the energy fields that drive markets and the geometry of the patterns in these fields. That will lead us to the development of the ***Fractal of Pi*** pattern. Then we will cover its application in markets through multiple examples. By the time you finish this material, you will have a new powerful tool to help you find these "chaos cracks" and to help you ***Cash In On Chaos***.

Energy Fields In Markets

When we look for patterns of chaos we have to ask the question, "Patterns in what?" The answer to that is that we are looking for patterns in an electric field. Why an electric field? Aren't markets driven by supply and demand?

Well, yes and no. On a macroscopic level, yes, markets are driven by supply and demand, but there is a third element, emotion. ***Emotions are electric currents***. Let me explain what I have found in my research.

Refer to Fig 2. This figure shows the sun, the solar wind, and the earth. The sun is composed of a huge glob of gas. It is not a rigid structure. It is a very dynamic structure. It exhibits swirls which lead to sunspots and coronal holes. It's electromagnetic field is immense. The Sun showers our solar system with an immense amount of energy. For



SOLAR STIRRING FORCE

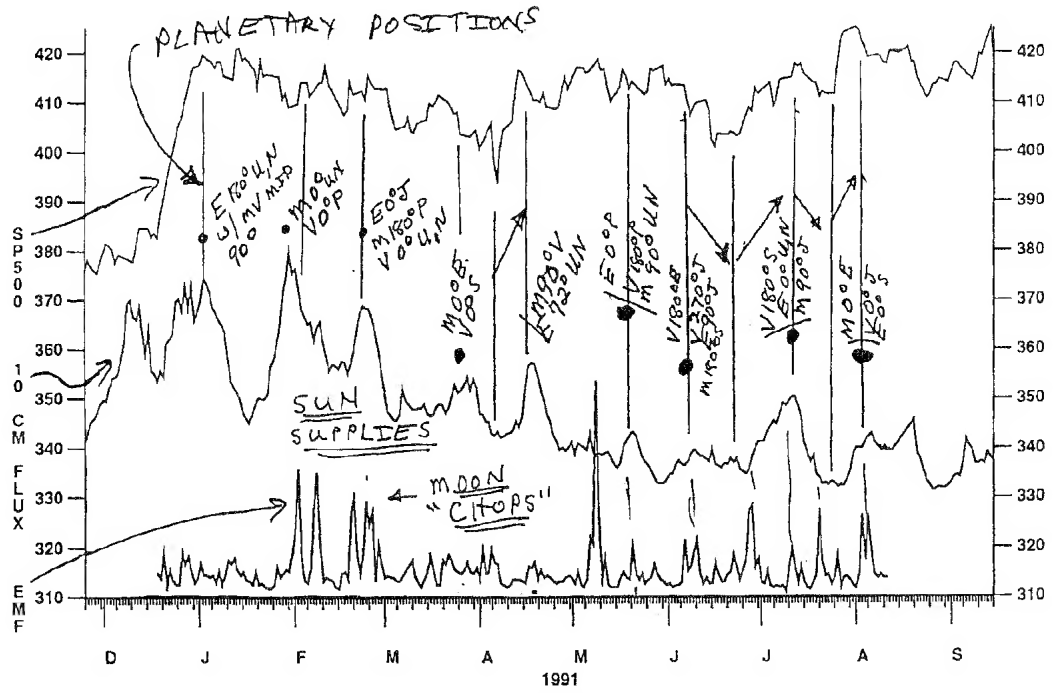
Figure 2.

some time that energy was believed to be a constant, but in the 1930's it was shown that this solar constant has up to a 2% variation. That does not sound like much, but a 2% variation on a huge number is also huge.

These variations can be linked to the motion of planets as they orbit the Sun. As the planets move around the Sun, they modify the pattern of gas swirls, thereby modifying the solar output. The solar radiation is carried to the earth on the solar wind. It is also carried as direct radiation such as sunshine and radio waves.

The solar wind carries charged particles. These charged particles flow outward from the sun in all directions. The pattern of flow is also modified by planetary motion. The planets, themselves, have electric fields and, therefore, attract particles. Planetary positions modify the shape of the outgoing solar wind. All of these factors affect the amount of energy arriving at the earth.

As the energy arrives at the earth, it encounters the earth's electromagnetic field. Our electromagnetic fields serve to shield the earth from this blast of charged particles. The charged particles form a teardrop shaped bow wave as they pass around the earth and proceed off into space. At the north and south poles particles follow the lines of electromagnetic flux and penetrate deeper into the atmosphere. This influx of charged particles can actually cause the atmosphere to glow. This phenomenon is knows as the



SP500,SOLAR FLUX, AND ELECTROMAGNETIC FIELD

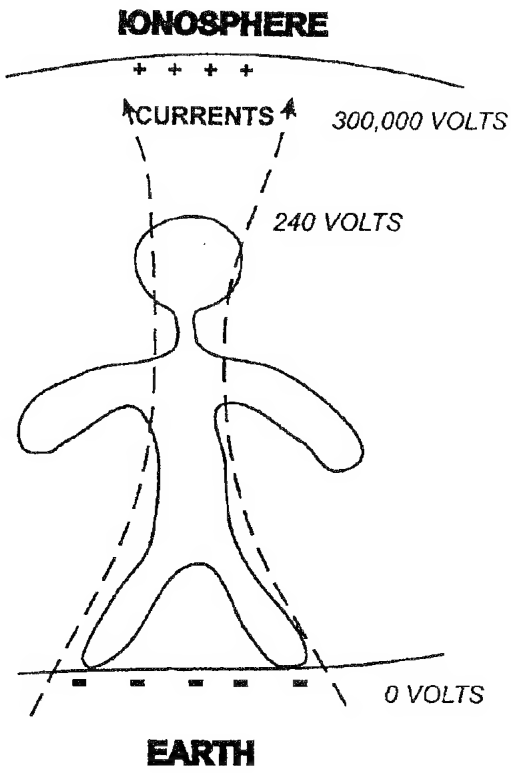
Figure 3.

Aurora Borealis . One Aurora Borealis produces more energy than all the electricity ever manufactured on earth.

Figure 3 shows one of many research studies relating price action to solar radiation and the earth's electromagnetic field. The top line in this figure are the S&P 500 prices in 1992. The middle line is the sun's 10 centimeter flux. The bottom line is the earth's electromagnetic field. The chart has been annotated at peaks with planetary positions. The first peak shows that the 10 centimeter flux peaked as Earth was 180 degrees to Uranus and Neptune, with Mercury and Venus at 90 degrees. The second peak in the flux had Mercury 0 degrees to Uranus and Neptune and Venus was 0 degrees to Pluto. The

3rd peak was Earth 0 degrees to Jupiter, Mercury 180 degrees to Pluto, and Venus 0 degrees to Uranus and Neptune. Similarly, each peak can be tracked to planetary positions

This, however, is only the energy being ***produced*** by the sun. That energy is modified in its interaction with our electromagnetic field. The main modifier is our moon. As the moon orbits the earth, it actually passes out in front of the bow wave, thereby blocking incoming energy at new moon. When the moon blocks this energy, fewer ions reach the earth. We experience emotional lows.



As the moon continues in its orbit, it passes into the stream of particles that have passed the earth. It reflects some of those particles back to the earth at full moon, causing humans to feel romantic and giddy.

So the moon, then, chops the energy as it arrives at earth, producing sharp, dramatic swings in the electromagnetic field.

The net result is that earth's electromagnetic field reflects solar radiation modified by planetary position and lunar position.

As the charged particles reach our atmosphere, they establish a charged layer which we call the ionosphere. This layer is charged to a voltage of approximately 300,000 volts. However, as just explained, this voltage is subject to sharp changes with the changes in the earth's electromagnetic field.

You can think of this charged layer in the ionosphere as the positive end of a 300,000 volt battery. When you stand on the earth, you are standing on the negative end of that battery. This voltage between the earth and the ionosphere is the earth's electrostatic field. That voltage causes currents to flow to the human body.

The field strength at 5 1/2 feet about the earth is approximately 240 volts. You can think of that as the voltage on your head. Fortunately for us, that voltage is not a high current source. Otherwise, we would fry. That voltage source produces a current through the human body of approximately 2500 nanoamperes. Research has shown that our

biological circuitry in our brains and our nervous system work on currents as low as one nanoampere.

This means that the external currents are 2500 times as strong as our biological currents. How can there ***not*** be an interaction? In fact, it is amazing that our biological currents actually function in this sort of an external environment. Fortunately, they do so, as they were designed to work in a differential mode which minimizes but does not eliminate the effects of these external currents.

What happens to us as human beings, then, is that the changes in these external currents change the currents in our bodies. We will experience an increase in the current from our feet to our head as an emotional high. We will experience a decrease in that current below the normal as an emotional letdown.

People buy and sell on emotional impulses. That is not just stocks and commodities, but new cars, fancy clothes, electronics, and a million other things that we probably do not need. Is it any wonder, then, that these buying patterns show up in markets?

These buying patterns, of course, show up in our price charts. These price charts reflect the output of a very complex system. So how is it possible to even hope to analyze and predict these price patterns? With such a complex system with so many variables, is there any order at all or are markets simply random?

Fortunately, the answer to that question is, "No! They are not random!" ***They are chaotic, but they are not random.*** There is an underlying order in the patterns of chaos. That order can be found by examining the basic properties of waves in energy fields.

The Geometry Of Waves In Energy Fields

As electromagnetic impulses hit our ionosphere, they act as stones dropped into a pond. They create an expanding circular pattern of waves. Figure 5 shows two of these patterns of concentric waves interfering with each other. We will study these patterns with just two interfering waves. However, keep in mind that each astrophysical event, such as the alignment of any two planets or the moon, will create an electromagnetic impulse.

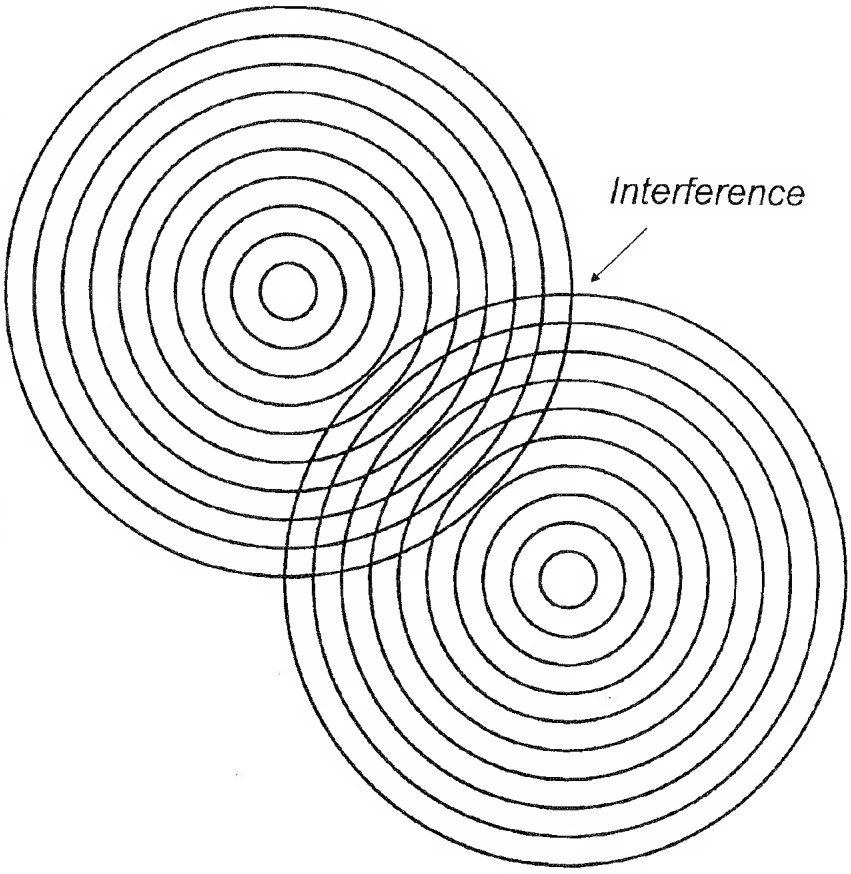


Figure 5.Concentric Waves

We are dealing with a system that has tens of impulses occurring close to each other. In fact, during some periods of time, there may be more than 100 impulses per day. So the system we are dealing with, really, consists of at least ten overlapped fields with wave patterns.

However, we have found that by considering just the interference pattern between two waves that we can begin to unravel the patterns of chaos in markets.

There is one difference between the patterns created in electric fields and those created in the pond. That is illustrated in Figure 6.

In addition to wave A traveling outward from its center and wave B traveling outward from its center, each of these patterns will have a ***rotation***. Electromagnetic waves propagate as a rotating vector field. These rotations lead to phenomena of their own which are covered separately in the vortex swirl course.

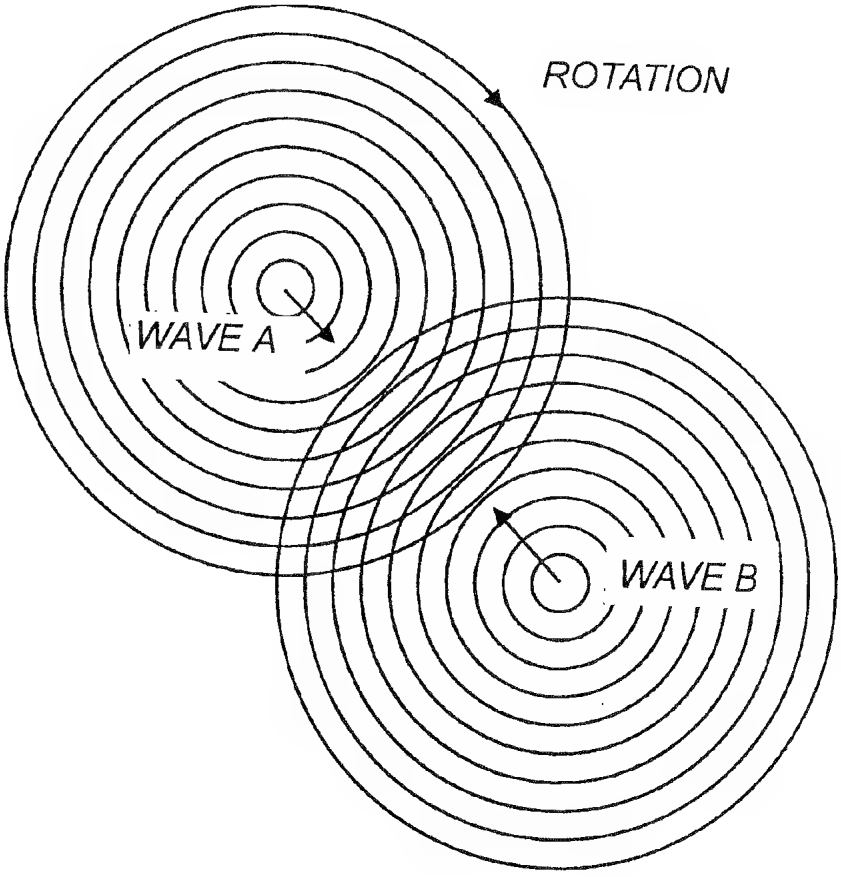


Figure 6.Wave Rotation

Now let us focus on the area of interference between the two waves.

Figure 7 highlights the arcs that bound this pattern of interference. These are the upper and lower limit cycles covered in the ***Cash In On Chaos*** course. They serve as the boundaries to the ***Hannula Market Fractal.***

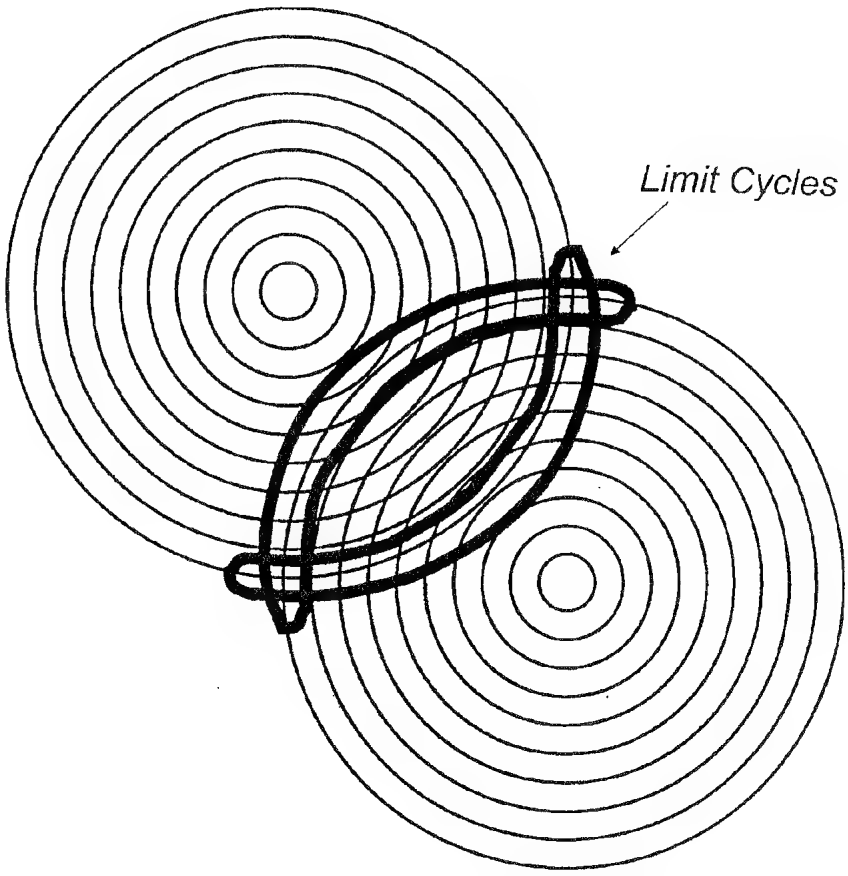


Figure 7. FRACTAL LIMIT CYCLES

Figure 8 shows a series of connected points that form a line of ***destructive interference***. At these points the two waves balance each other. This line of balance forms the ***Line of Central Tendency (LCT)*** covered in the ***Cash In On Chaos*** course.

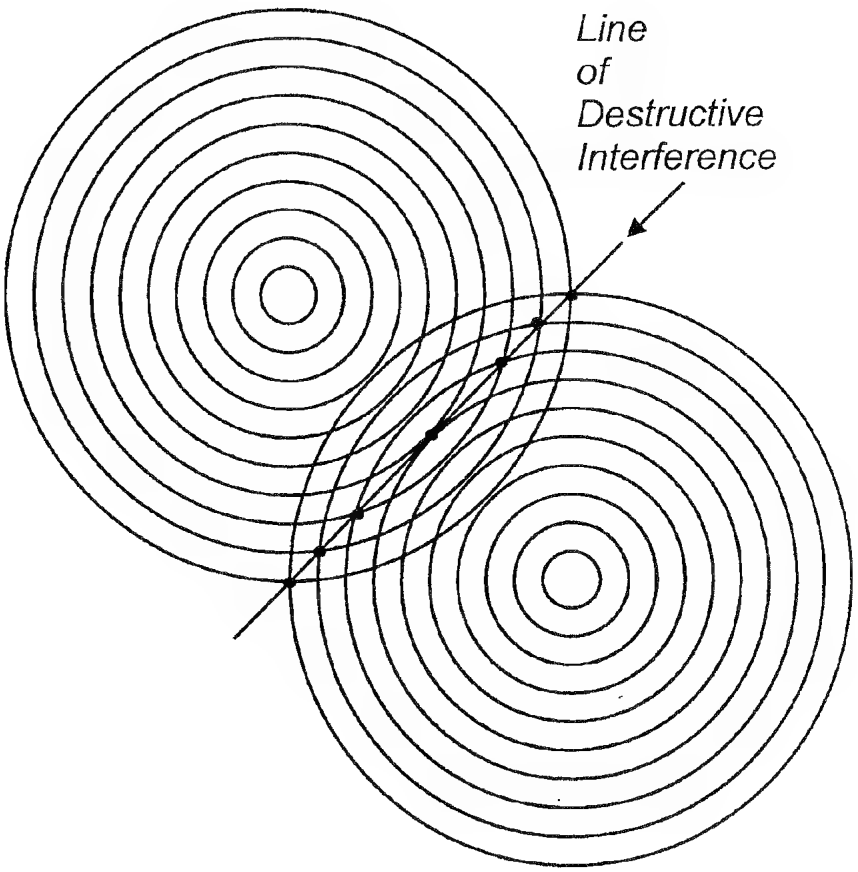


Figure 8. Line of Central Tendency

Figure 9 shows 3 other lines of connected interference points. These are lines of ***constructive interference***. The two waves are interfering, but one is stronger than the other.

The center of these 3 lines forms a ***crossbar***, or halfway point, in the ***Hannula Market Fractal***. The other two bars are the ***quarter bars*** of the fractal pattern.

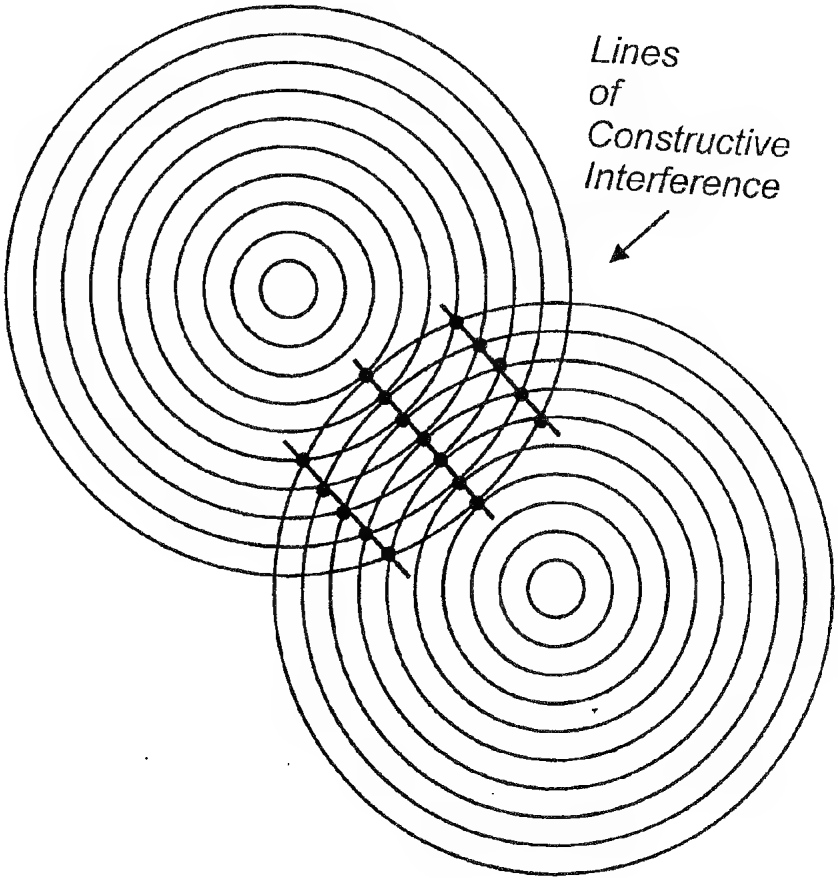


Figure 9. Cross Bar Formation

Figure 10, then, shows the completed ***Hannula Market Fractal*** with its seven elements of upper limit cycle, lower limit cycle, line of central tendency, crossbar and the two quarter bars.

One can see, therefore, that the ***Hannula Market Fractal*** is a pattern that is driven by the physics of the earth's electromagnetic field. This pattern shows up in markets because that electric field effects all trading.

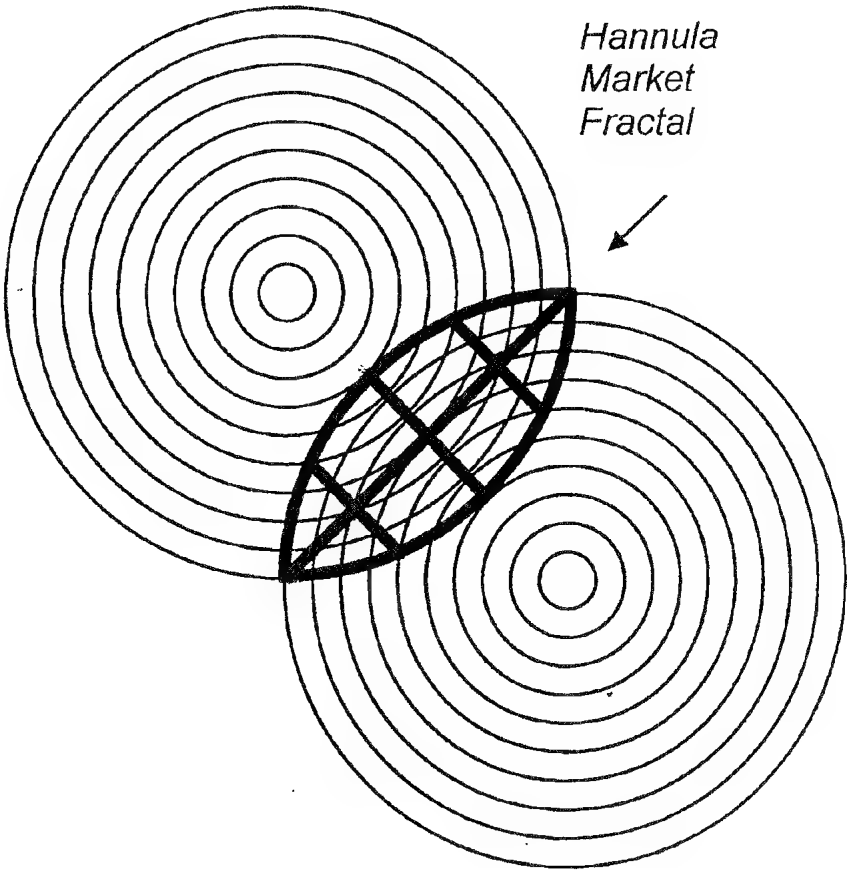


Figure 10. Hannula Market Fractal

Now let us examine some other properties of the interference pattern. The strongest interference patterns will tend to be those whose centers fall on a rectangular grid. Because our atmosphere represents the surface of a sphere, the size of the sphere will tend to determine grid points. To a first approximation this is a rectangular grid like our grid of latitude and longitude.

Figure 11 shows this square on a harmonic grid. It has a diagonal of 14.14 wavelengths-almost the perfect 2 times 7. This factor accounts for the average of 7 moves in the ***Hannula Market Fractal***. For every 10 wavelengths encountered in time horizontally or price vertically, there are 14.4 wavelengths traveling the diagonal of the square.

If one takes the size of the square as 1, the diagonal is 1.414 which is equal to the square root of 2. Many market researchers have observed this square root of 2 ratio in market patterns.

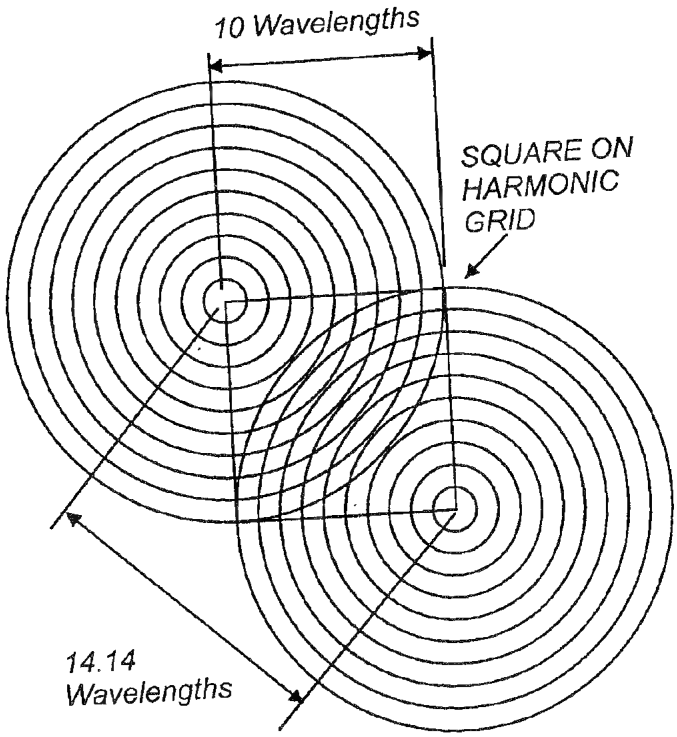


Figure 11. Wave Lengths

The 14 to 10 ratio is the same as a 7 to 5 ratio. This ratio is so common that it shows up in our division of the week into 7 days of 5 working days and 2 days for a weekend.

Integer ratios show how energy adds together. These ratios are called ***harmonics.*** Let me give you an example. If the two of us sit at a table and pound our fists, the energy of our strikes of the table will add together only if we strike the table at the same time. Suppose I strike the table once every 6 seconds and you strike the table once every 3 seconds. If we start at the same time, every 6 seconds our energies will add together. However, if I strike the table every 7 seconds and we start together, only the third strike of mine and the seventh strike of yours will add together. That is because 7 times 3 seconds equals 3 times 7 seconds equals 21 seconds. We have formed an integer ratio of 7 to 3. That harmonic determines the points at which energy adds together.

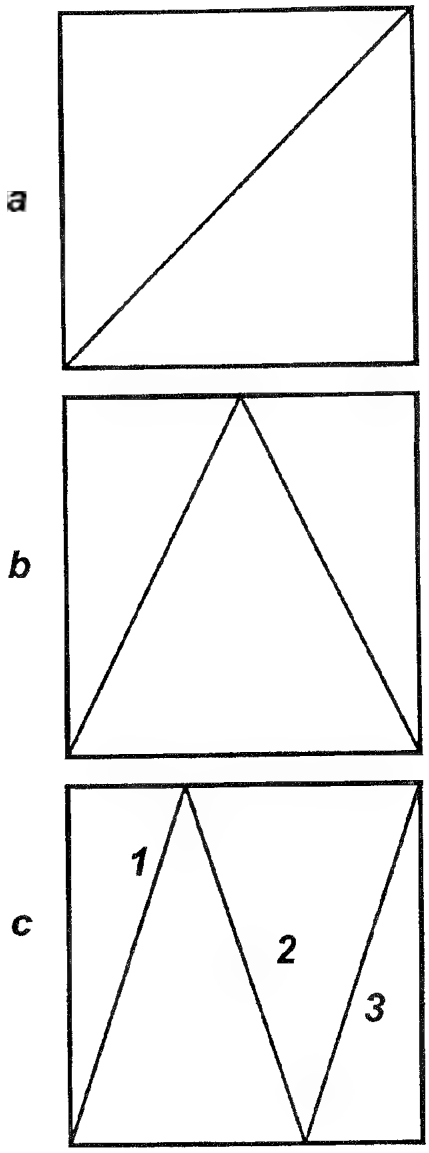


Figure 14 shows a square divided into harmonics. A shows the first harmonic which is also known as the fundamental. B shows two moves within the square which represent the second harmonic. C shows 3 moves which represents the third harmonic.

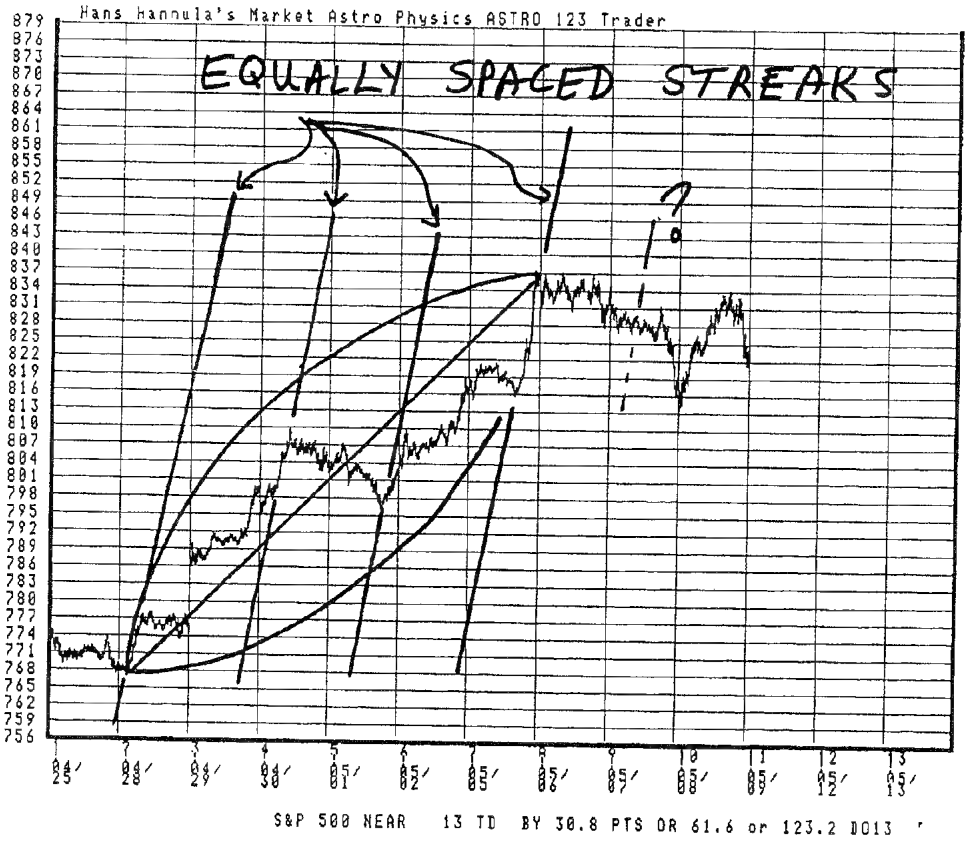
Notice as the third harmonic forms, moves 1 and 3 form parallel lines. As we go to higher harmonics, moves 2, 4, and 6 etc. and 1, 3, 5, and 7 etc. will form sets of parallel lines.

Keep this in mind as we proceed to the next chapter where I will develop the ***Fractal of Pi*** pattern. Remember that the interference patterns represent energy adding or not adding together and that the addition of this energy depends upon the harmonics involved.

Figure 14. Harmonics In Square

The Fractal Of Pi Pattern

The discovery of the ***Fractal of Pi*** pattern occurred October 31, 1996. It came about because three things happened. The first thing is something I had known for a long time. It is shown in Figure 15.



The piece of information that I had known for some time was that streaks in markets tended to be ***equally spaced.*** I had often found these in charts by using a parallel ruler. In fact, I had reduced my trading to a practice of hunting for these streaks. But I had not tied the streaks to the circular patterns of the waves or the ***Hannula Market Fractal.*** Yet I had the piece of information that the streaks tended to be equally spaced. That told me that they were dependent upon some particular harmonics. But what harmonics?

The second element was a question I asked myself. "Am I really seeing circles or am I seeing polygons?" A polygon is a many sided figure such as a triangle, a square, a pentagon, hexagon, or octagon. So I began to think about the history of the number Pi. It's Greek symbol is

$$\Pi$$

There is a beautiful book, ***The History of Pi***, written by Peter Beckmann, published by the Golan Press, Box 1342, Boulder, CO, 80306

This book tells the history of the discovery of the number Pi, 3.1415926535. This is the ratio between the diameter of a circle and the circumference around it. I began thinking of this because I realized that the ***Hannula Market Fractal*** was a quarter circle inside of a square. The side of the square was 1/2 the diameter, or radius, of the circle.

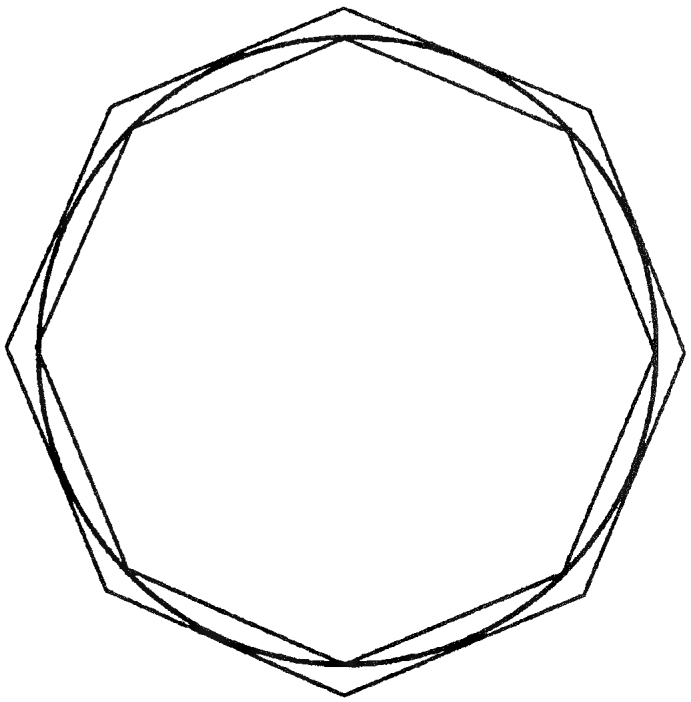
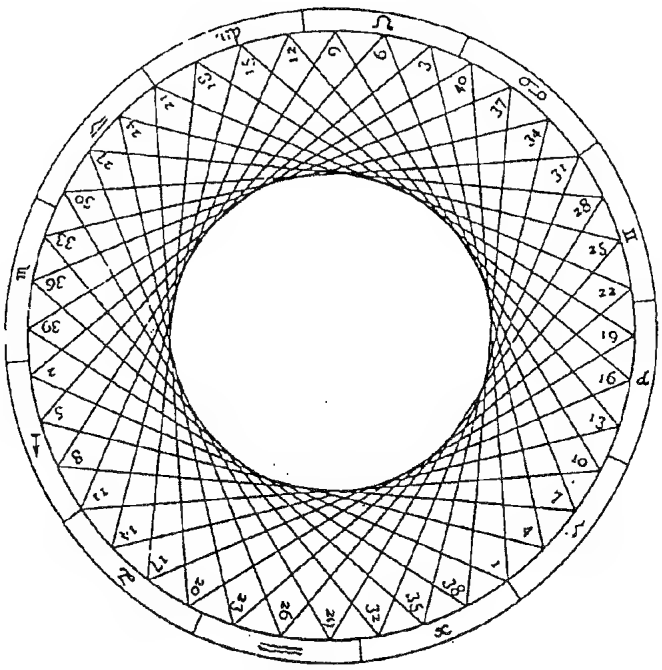


Figure 16. Archimede's Method of Calculating PI

I remembered Archimede's method of calculating Pi. This is shown in Figure 16. Archimedes established a polygon inside of the circle and calculated its length, and a polygon outside of the circle and calculated its length. The ratios between these lengths and the diameter of the circle bounded the value of Pi. By adding more and more sides to the polygons, he could converge on the number Pi. Archimedes started with a hexagon, and progressively doubled the number of sides until he arrived at a polygon of 96 sides, which yielded a value for Pi that fell between 3 10/71 and 3 1/7. Many of you may have learned the 3 1/7th number as 22/7. This is a ratio of integers. It contains 2 times 11 and 7. Interesting. ***Pi reveals which harmonics <u>create</u> circles !*** That's interesting, because waves form circles.

So, how well can a polygon approximate a circle? Figure 17 comes from the book "Pioneers of Science", published by Sir Oliver Lodge in London in 1893. It shows a regular polygon of 40 sides, approximating a circle very well.

As an interesting side note, notice that the outer circle is a Zodiac. Do you think these ancient mathematicians weren't trying to figure out how the heavens worked and how they could profit by that knowledge? You bet they were! Just as we are.



A regular polygon of 40 sides. No internal circle has been drawn.

Figure 17.

The third factor at play in the discovery of the ***Fractal of Pi*** was my own personal energy cycles. Figure 18, shown on the next page, shows my heliocentric and geocentric charts on the date of discovery.

Without going into all the detail, just notice that the heliocentric chart has strong energy vibrations set up on the fourth harmonic along my ***life axis***. Your life axis is the axis upon which your Sun is when you were born. My life axis also has Pluto on it. That axis was being transited by Venus, Mars, Jupiter, Neptune, and Uranus, while Mercury and Earth were transiting the other axis of the square.

My geocentric chart shows a strong eigth harmonic. This pattern has several interesting aspects, the most significant of which is that the Moon and Jupiter are transiting my ***Arabic Point of Fortune***. Mars is transiting my ***Creativity Axis,*** where I have my natal Mercury, Venus, and Moon in Aquarius. That coupled to the Mars natal energy, which was being transited by Mercury and the Sun on my mid-heaven.

If you look in the geocentric chart, Saturn, Venus, and the Node are lined horizontally with my natal Neptune. One way of interpreting this is to use key words. Saturn is crystallization. The Node, I have found, is knowledge. Venus is love, and Neptune is foundation or fundamental. That translates as "Crystallization of knowledge about a love that is fundamental". I love the markets.

Very simply, the energies which build me as a life form were undergoing a high degree of harmony and energy addition. That led to the crystallization of the knowledge.

So this is how energy works. All of my discoveries have similar sorts of patterns. They come to me because energy adds in me just as they add to make market moves. I digressed on this to give you, yet, another example of energy adding together with harmonics.

When these three factors came together, they came together in a flash of insight. I suddenly saw the ***Fractal of Pi*** pattern. ***Everything*** works on energy harmonics.

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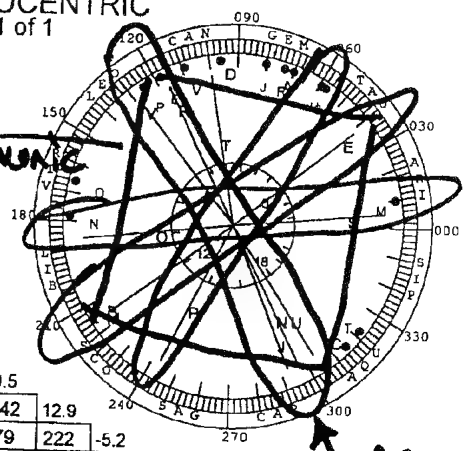
HELIOCENTRIC
page 1 of 1

4th Harmonic



Life Axis

CURRENT TO NATAL

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	154	1.5													
V	253	340	2.7												
E	262	349	79	0.0											
R	217	305	35	317	1.7										
J	224	311	41	324	147	-0.3									
S	201	289	19	301	125	52	-2.4								
U	203	290	20	303	126	54	115	-0.6							
N	322	50	140	62	245	173	234	241	0.5						
P	269	356	86	8	192	120	181	188	242	12.9					
T	106	194	284	206	29	317	18	25	79	222	-5.2				
O	310	37	127	50	233	161	222	229	283	66	340				
A	214	301	31	314	137	65	126	133	187	330	244	0	Ascendt		
B	358	85	175	98	281	209	270	277	331	114	28	144	0	Vertex	
C	99	186	276	199	22	310	11	18	72	215	129	245	101	0	MidHeav
D	240	327	57	340	163	91	152	159	213	356	270	26	242	141	0 PtFortun
	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D <- NATAL

GEOCENTRIC
page 1 of 1

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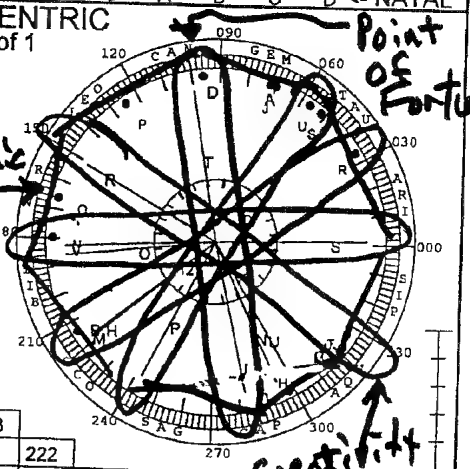
8th Harmonic



Point of Fortune

Creativity Axis

CURRENT TO NATAL

	M	V	H	R	J	S	U	N	P	T	O	A	B	C	D
M	97														
V	132	138													
H	96	102	79												
R	164	170	147	243											
J	32	38	15	111	149										
S	313	319	296	32	70	50									
U	14	20	357	93	131	111	116								
N	19	25	3	98	137	116	121	245							
P	73	79	56	151	190	170	174	298	243						
T	215	221	198	294	332	312	317	80	25	222					
O	128	134	112	207	246	225	230	353	299	136	340				
A	245	251	228	323	2	342	346	110	55	330	96	0	Ascendt		
B	101	107	84	179	218	198	202	326	271	108	312	216	0	Vertex	
C	360	6	343	78	117	97	101	225	170	7	211	115	101	0	MidHeav
D	219	225	202	297	336	316	320	84	29	226	70	334	242	141	0 PtFortun
	M	V	H	R	J	S	U	N	P	T	O	A	B	C	D <- NATAL

By studying the slopes of the lines (the harmonics) in the streaks, I discovered that the ratios that were involved were two elevenths and three fourteenths. I realized that 14 divided by 2 was 7, and 2 times 11 was 22. That reminded me of the 22/7 = Pi. So these streaks were related not only to these harmonics but are a part of what creates the arcs and circles in the wave patterns.

So let us get on with developing the Fractal of Pi pattern. Figure 19 shows the construction of the upstreaks. We start with a square. We divide its top and bottom into 11 parts. Then we draw a line from the origin of the square in the lower left corner to the second division on the top line. This gives us a slope of two elevenths. That is shown in part A.

Then we move over two divisions and draw another line parallel to the first. We repeat this pattern across the square, including the final line which actually goes outside the square.

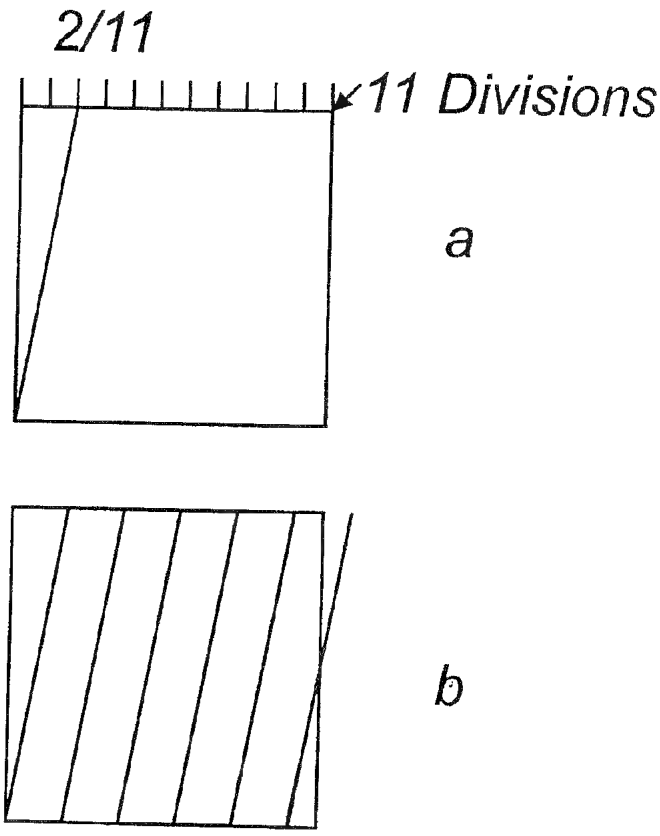


Figure 19. THE UP STREAKS

This 11/2 or 5.5 harmonic is the first half harmonic below the sixth. The sixth harmonic is stable, but the 5.5 is unstable. Also, the number 55 plays an important role in chaotic moves. This is covered in greater detail in the vortex swirl corse.

Figure 20 shows the second part of the construction. This square is divided top and bottom into fourteen parts as shown. We then move over 3 divisions and draw a line from the top left corner down to the third division on the bottom. This creates a downgoing streak of three fourteenths harmonic.

This pattern is then repeated every third division to create the pattern of downgoing streaks. Again, the final streak leaves the square. These two sets of upgoing and downgoing streaks inside the square are then combined with the seven elements of the ***Hannula Market Fractal*** to form the completed ***Fractal of Pi*** pattern.

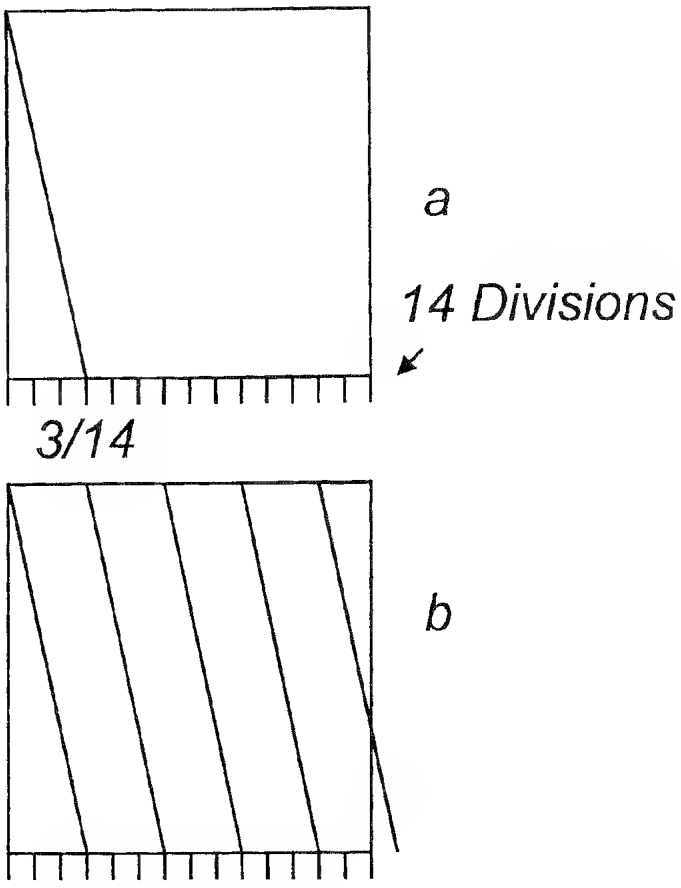


Figure 20. THE DOWN STREAKS

The 14/3 or 4.66 harmonic is interesting, because it is very close to Feigenbaum's number of 4.669201609. This is a number arising so often in chaos theory that is is considered a new universal constant like Pi. Here we have found them related to each other.

360 : 4.669201609 = 77,1

This is shown in Figure 21. Notice that the pattern has been labeled with an up and with a down. The down is deliberately backwards so that when the pattern is placed on a mylar overlay, down will read correctly when the overlay is flipped over for a downgoing pattern.

These 11 lines then add detail to the ***Hannula Market Fractal***. This detail will prove very useful in helping us to identify fractal patterns in markets. The knowledge of where the streaks are will prove very useful in recognizing good trading opportunities.

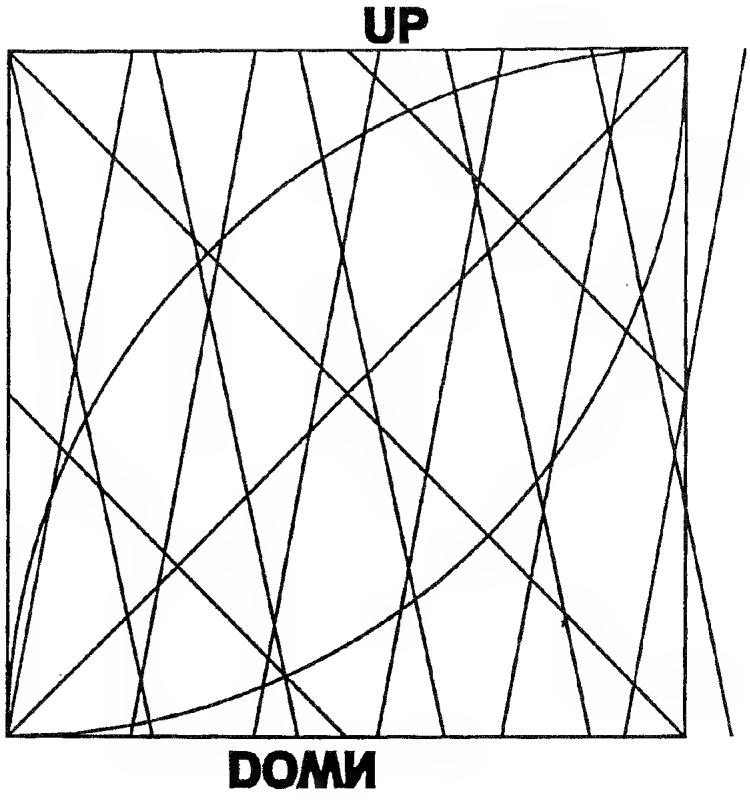


Figure 21. Completed Fractal of Pi

So how well does the pattern fit reality? Theory is nice, but if your theory doesn't keep the pipes from leaking, your plumbing is wrong.

Figure 22 shows a Fractal of Pi pattern in the S&P. Two fast up moves at A and B set the

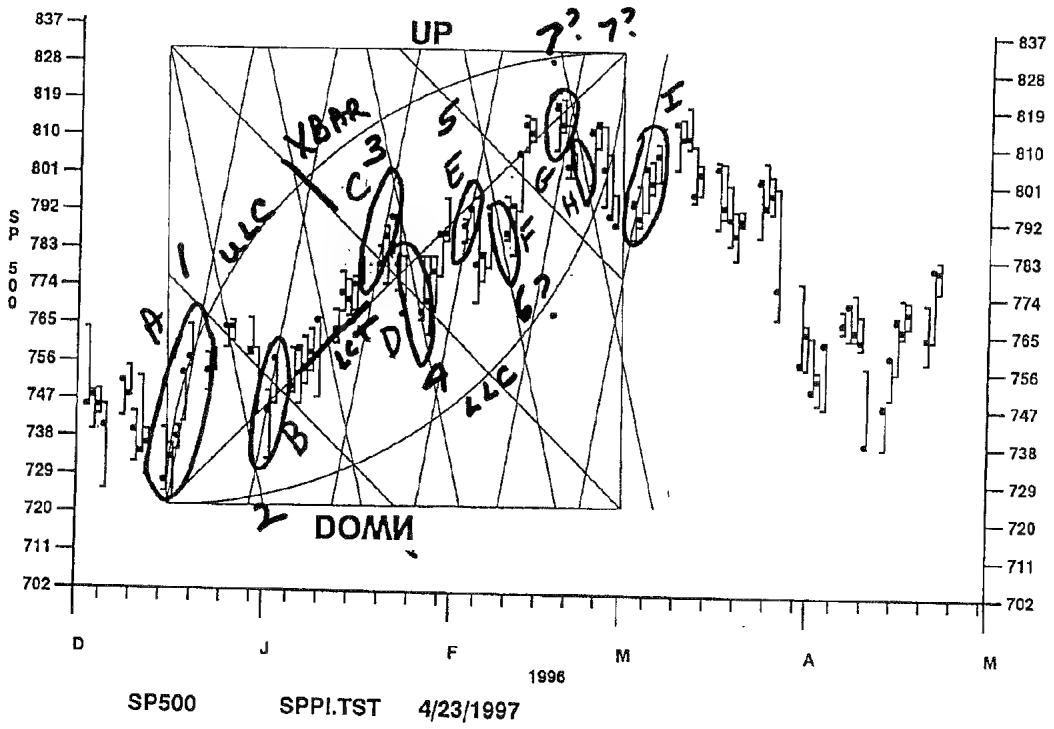


Figure 22.

streak spacing. C and D also showed evidence of streaks, as did the areas at E and F. The market peaked at the intersection of streaks of G and H. The market did not reach the end of the fractal point, but dropped below the lower limit cycle and staged a surprisingly fast rally on the streak I.

This real world example of a ***Fractal of Pi*** pattern had a good upper limit cycle, good energy following the line of central tendency, a recognizable cross bar, but got a little confusing during moves 6 and 7. As other inputs came into the energy system, the fractal became distorted and fractured. So rather than making a high at the end of the fractal pattern, it made a low. It then caught the final up streak at I, producing a fast rally. Of course, following I the market began to develop a downgoing fractal pattern.

That, then, is the ***Fractal of Pi***. Of course, knowledge of this pattern does not lead to instant riches. This course does not present a canned trading system. You have to develop your own ability to recognize the patterns, recognize trade setup opportunities, and take advantage of those opportunities. There is far more to trading than simple buys and sells, but ***the foundation of all long term success must be in your knowledge of how markets behave***.

Markets are energy fields. They behave according to the laws of energy addition. Energy adds according to harmonics. The harmonics of the ***Fractal of Pi*** cause rapid moves or streaks in markets. The Fractal of Pi pattern gives you a tool to help recognize these streak opportunities.

Figure 23 shows my first use of the ***Fractal of Pi*** pattern. On my Position Trading Hotline, we were elected short at 705 on the December S&P just prior to the close of November 1st. I recognized a move one up, two down, three up, and four down which happened to go a little lower than I expected.

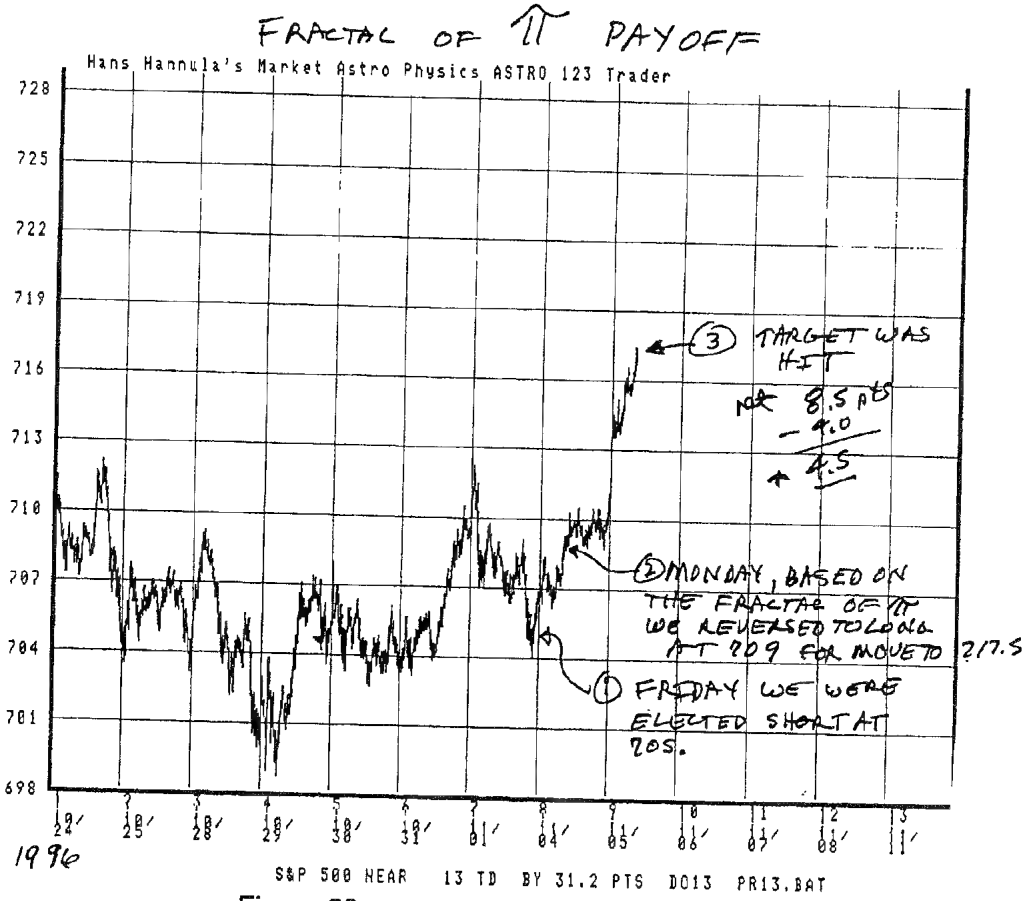


Figure 23.

I wasn't impressed by the late Friday entry, so I did some analysis. I overlaid this chart with the ***Fractal of Pi*** pattern. I located a line, which if broken above, would indicate that a streak was under way. I instructed hotline callers to place a "stop and reverse" order to reverse the position from short to being long at 709, and to ***Cash In*** on a move to 717 1/2. That move occurred on Tuesday and we cashed in at 717 1/2. Tuesday the market opened gap up and rallied sharply to that point. Subtracting the 4 points for our reversal, our net gain was still +4.5 points or $2,250 before commissions.

Notice how I applied the ***Fractal of Pi*** pattern here. Previous analysis had indicated we should be a seller on a break of 705. Once we were in that position, we again analyzed the pattern using the ***Fractal of Pi*** and looked at the ***possibilities.*** The market had been

down all day on the 1st and it could have well continued down on the 4th. However, the pattern indicated that if it did turn up, it would turn up with a vengeance, following a streak. This suggested that prudence was the better part of valor, and no position was so sacred that it couldn't be reversed, given better information. But where to put the stop? The ***Fractal of Pi*** pattern told us exactly where to put the stop. In this case, it was just above the crossbar. And where to cash in? The cash in point was chosen at the point where two of the streak lines intersect.

In summary, the ***Fractal of Pi*** pattern gives you a forecasting tool to forecast the possibilities of market movement. To be successful in trading, one must also use good money management. ***That means never letting a streak go against you***. Keep your losses small by using stops and work to catch streaks in your favor. When you catch them in your favor, cash them in when they have run their course.

In this way, you will have small losses, small gains, and big gains when you catch a streak. ***You never have a big loss***. Over time, you will ***Cash In On Chaos***. This is not a mechanical system. It depends upon knowledge, work, and judgment. I have found that there is no other way to make money in any field. It is especially true in markets.

Fractal Of Pi Examples

The old saying that a picture is worth a thousand words is certainly true when it comes to illustrating the utility of the ***Fractal of Pi*** pattern. So this chapter will present some examples of ***Fractal of Pi*** patterns as they occurred in markets. All of these patterns were recognized in real time. Several of them were traded with good results. The point of this chapter, though, is to show you the variety of markets under which you will find the ***Fractal of Pi*** patterns occurring.

Let me start with an example which is probably my best application of the pattern to date. Figure 24 shows the March S&P Futures contract on February 5, 1997. The market began with a modest rally, then sold off on a 6 point decline. Then it climbed up to regain much of this decline in an early afternoon rally. Using the basic ***Hannula Market Fractal***, I recognized that this was a possible move 1 and move 2 in a downgoing fractal. I therefore sold two contracts at 792.40. I cashed one in at 791 and held the second one.

The market then oscillated up and down in a three point range for the next half hour. It then began a sharp drop. During this drop, using the ***Fractal of Pi*** pattern, I recognized that this was probably a move 4 streak.

Using the ***Fractal of Pi*** pattern and adjusting the scaling on my real time system, I was able to anticipate a bottom of the streak coming near the 774 level. That was the point estimated for the lower limit cycle. Part of this estimation process was to note that the line of central tendency in the streak intersected near that area.

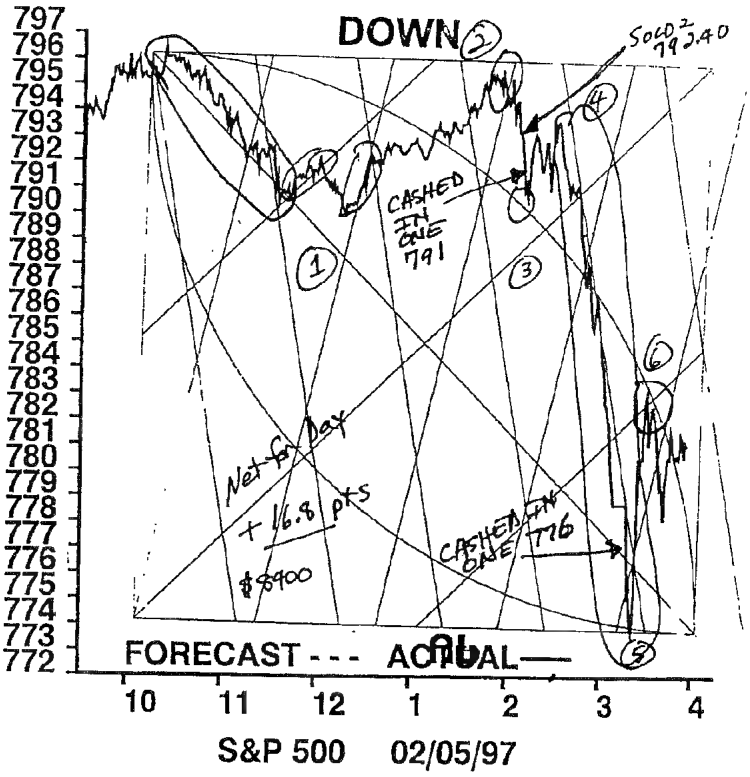


Figure 24.

When prices reached the 774 level, I placed my covering stop immediately above the intersection of the lower limit cycle in the next upgoing streak. Within minutes my stop was hit and I was out, having captured a total of 16.8 points for a one day profit of $8,400 before commissions.

Of course, like all great trades, this one had a little bit of luck involved in it. ***Luck is what happens to you when chance meets a prepared mind.*** This is a very distorted ***Hannula Market Fractal***, yet it fits the more detailed pattern of the ***Fractal of Pi***, and I was able in real time to recognize the various elements. Being able to keep up with a fast moving market like this takes practice, patience, and perseverance, but it can be incredibly profitable.

The question, of course, is how wide spread the ***Fractal of Pi*** pattern is. Does it occur in other markets, or just the S&P ? Most of my examples will come from the S&P 500,simply because that is the market I personally trade. However, as I develop all of my tools I do test them in various markets to insure that what I have found is universally applicable. This is further assured by developing an underlying physical theory of market motion, rather than curve-fitting some arbitrary pattern to one market.

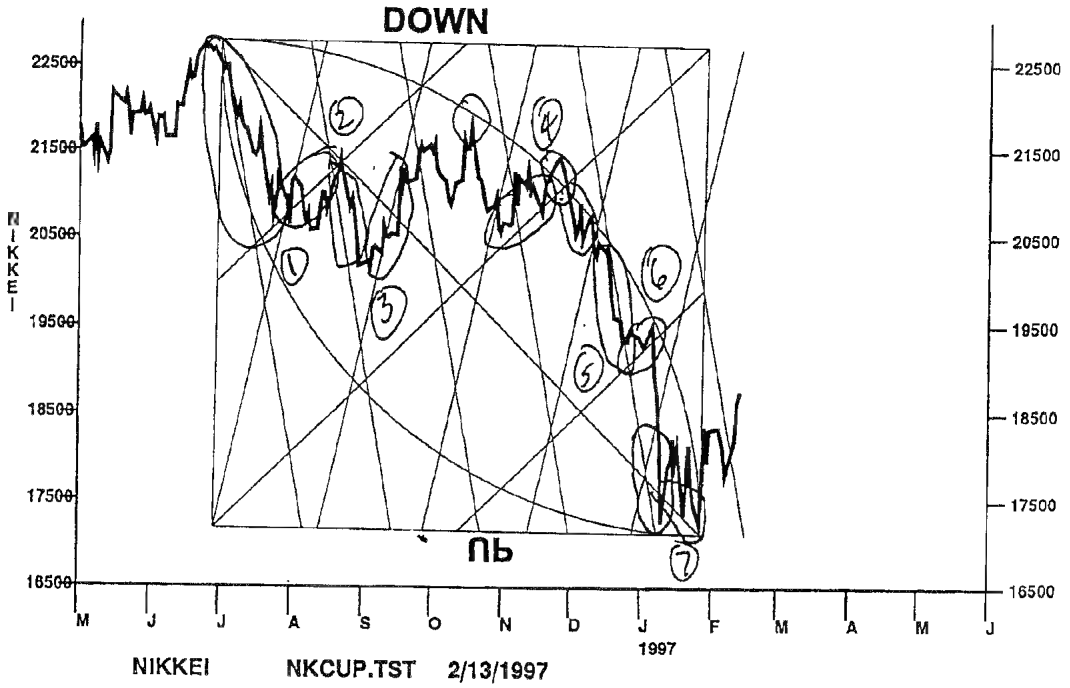


Figure 25.

So does the ***Fractal of Pi*** work in other markets and in other time frames? Of course it does. Figure 25 shows a 7 month pattern in the Japanese stock market. The market declined in a move 1, followed up the quarter bar in a move 2, followed the down streak in move 3, and then followed an up streak until it hit the upper limit cycles and congested

sideways into the crossbar to form move 4. It then started down the upper limit cycle, got caught by down streak 4, rallied slightly on the quarter bar, and then dropped to the lower limit cycle and oscillated about the line of central tendency to complete move 7.

At this point it is probably helpful to introduce some notation which will help with the descriptions. Figure 26 shows the ***Fractal of Pi*** with the various elements labeled. The center line is the line of central tendency, LCT. The top arc of the fractal is the upper limit cycle, ULC. The lower arc is the lower limit cycle, LLC. The fractal is divided in half by the crossbar, XB. It is further divided into quarters by the quarter bar, QB1, and the quarter bar, QB2. The streaks are simply labeled U for up and D for down and numbered from left to right. So we have the first up streak, U1, the second up streak, U2, third one, U3, fourth one, U4, fifth one U5, and sixth one U6, which extends beyond the square of the pattern. Similarly, we have down streaks, D1, D2, D3, D4, and D5. Whether the fractal is going up or down, the streaks maintain their relative directional labeling. In other words, down streaks are always labeled D1 through D5 for a up fractal, and D1 through D6 for down fractal. Up streaks will be labeled U1 through U6 for an up fractal, and U1 through U5 for a down fractal. That may sound complicated but it is actually pretty simple. If it is going down, it is labeled with a D. If its going up, its labeled with a U. Numbering is always from left to right.

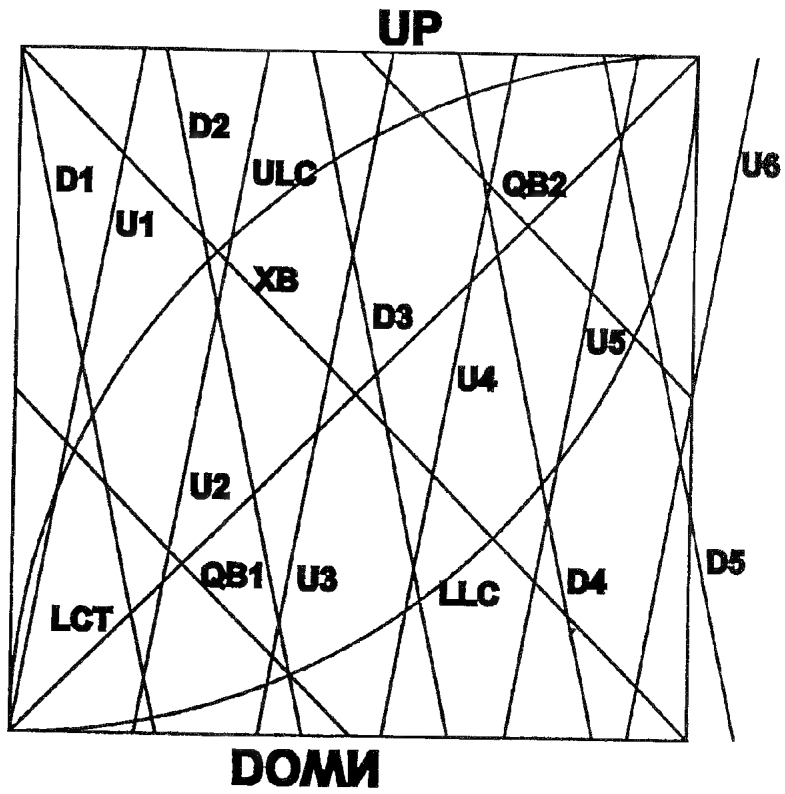


Figure 26. Labelled FOP

Figure 26

As this is being written, a complete ***Fractal of Pi*** pattern is apparent in the Dow Jones Industrials. Of course, the surest way to kill a pattern that is recognized is to publish it. However, fools rush in where angels fear to tread, so here go I.

Figure 27 shows a 10 month ***Fractal of Pi*** in the Dow. This pattern began in July 1996 and rallied fairly strongly along the line of central tendency up through move 5. The streaks were apparent with a slight pullback along D1 and D2, and rallies along U2, U3, and U4. Prices broke down from the March 1997 highs along the upper quarterbar QB2.

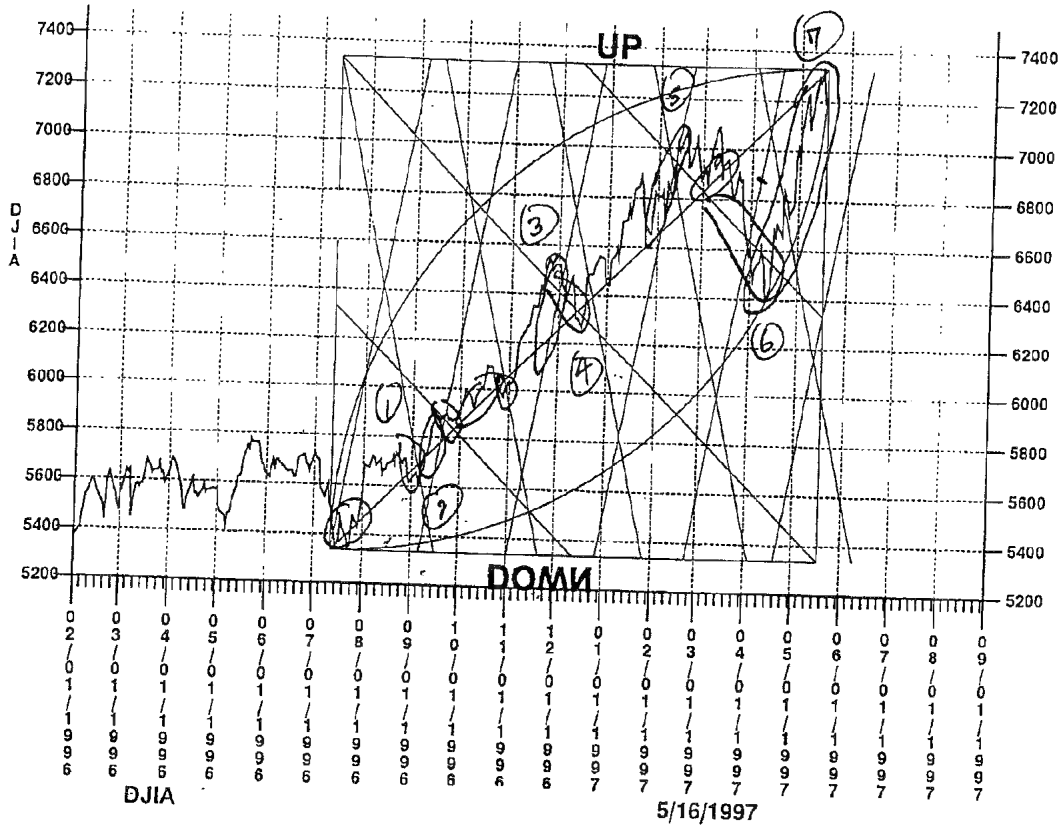


Figure 27.

This caused many analysts to announce that the top is in only to experience the lower limit cycle catching prices to produce a strong move 7 rally up to retouch the line of central tendency. This move 7 is a typical "Velociraptor" move 7 as covered in the ***Cash In On Chaos*** course. Its development will be discussed further in a later chapter.

Figure 28 shows a ***Fractal of Pi*** pattern in gold. This pattern lasted 6 1/2 months. It was also recognized in real time and an end of fractal trade was made on our Position Trading Hotline. The move started with a small decline along the line of central tendency, a rally to the upper limit cycle, and a decline along D2. Prices then rallied to the intersection of

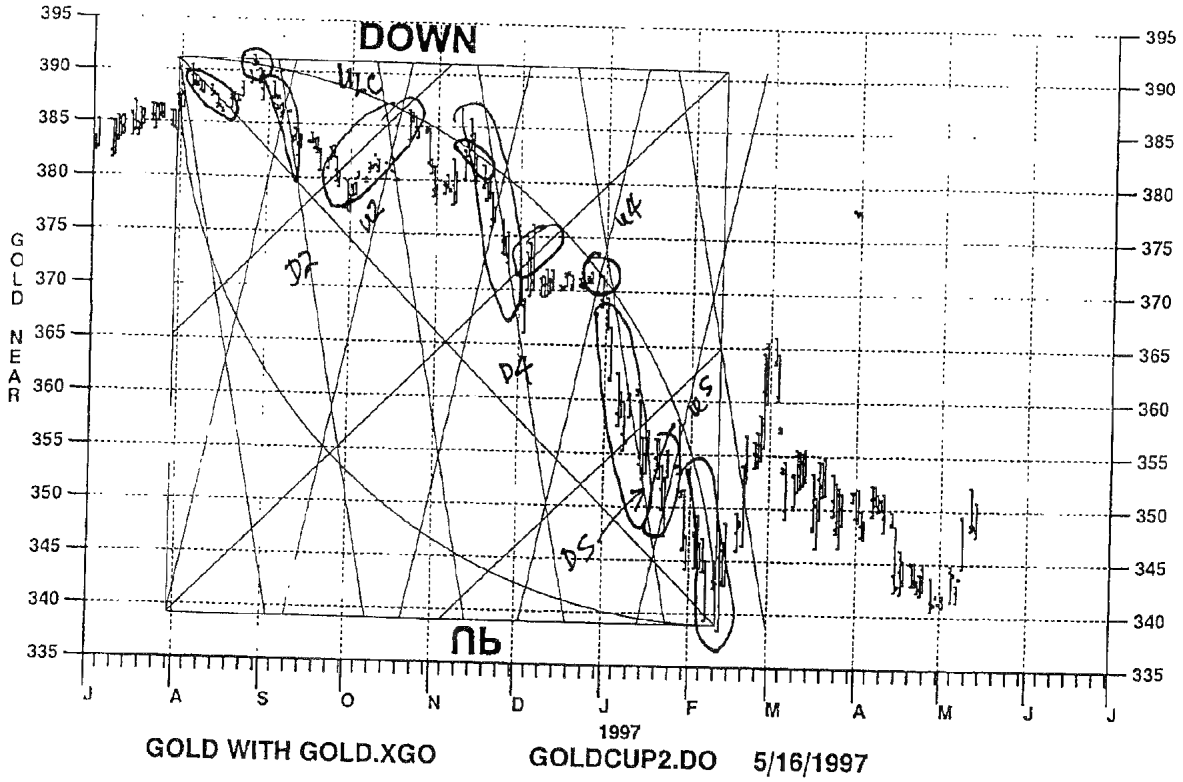


Figure 28.

U2 and the upper limit cycle, and followed the upper limit cycle into D4. The sharp break of D4 led to a few days of rally along the crossbar and sideward motion into the intersection of the upper limit cycle and D5. That dropped prices sharply into a small rally along U5, up into the upper limit cycle, which then dropped prices down to the end of the fractal. At the end of the fractal, the pattern was complete and prices bounced sharply up to 365.

Notice how the moves that broke sharply began where the streaks intersected with the upper limit cycles. This is a general tendency which can be used for trade selection.

Figure 29 shows an up ***Fractal of Pi*** in IBM. This was a fairly boring fractal pattern until it reached the crossbar and moved sideways into the upstreak U4. This carried prices sharply to the upper limit cycle from which they pulled back to the line of central tendency, fell somewhat below it on the D5 streak, then rallied to complete the fractal.

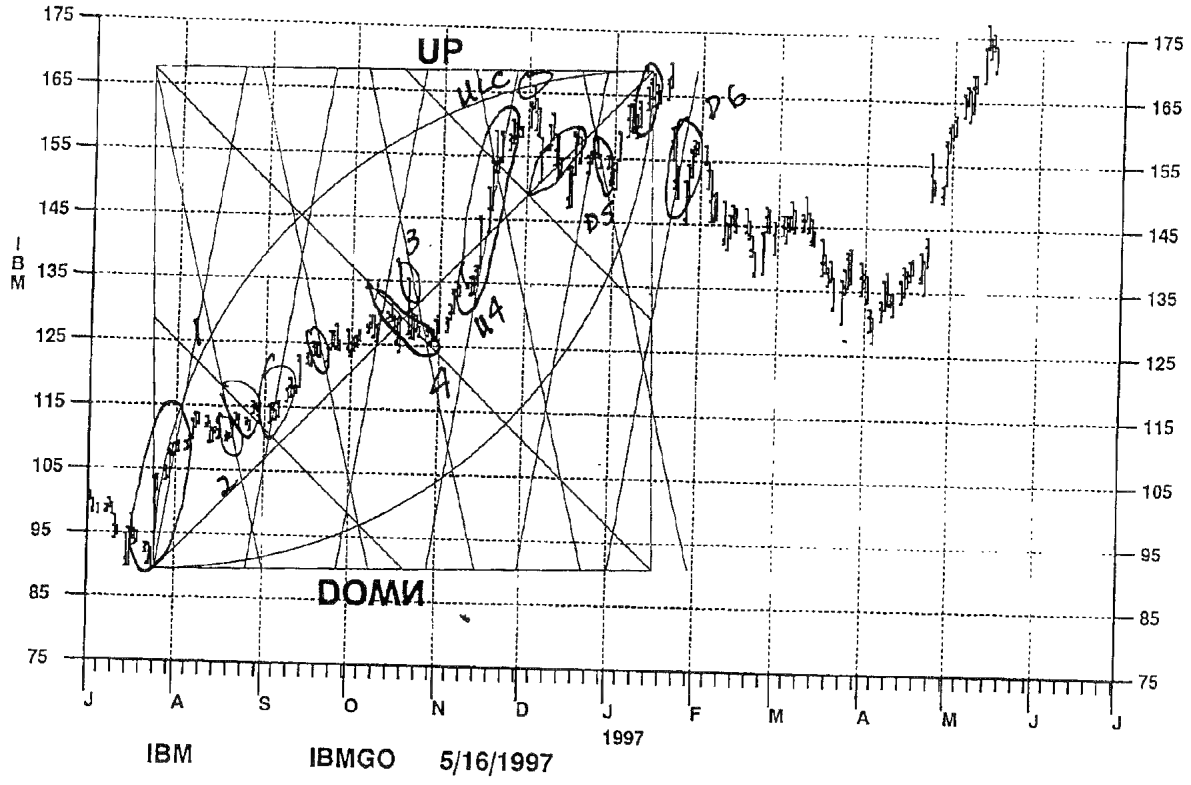


Figure 29

Following the end of fractal pattern, the up streak D6 caused a modest 12 point rally.

The last couple of examples show fractals that were months long.

The next example in Figure 30 shows a 10 year long fractal in the Swiss Franc. This fractal was very strong at the beginning, following the upper limit cycle all the way up into the downgoing streak D2. This finally broke the rally and sent it into a decline along the cross bar, down into the line of central tendency, until it caught U3. This upstreak caused a

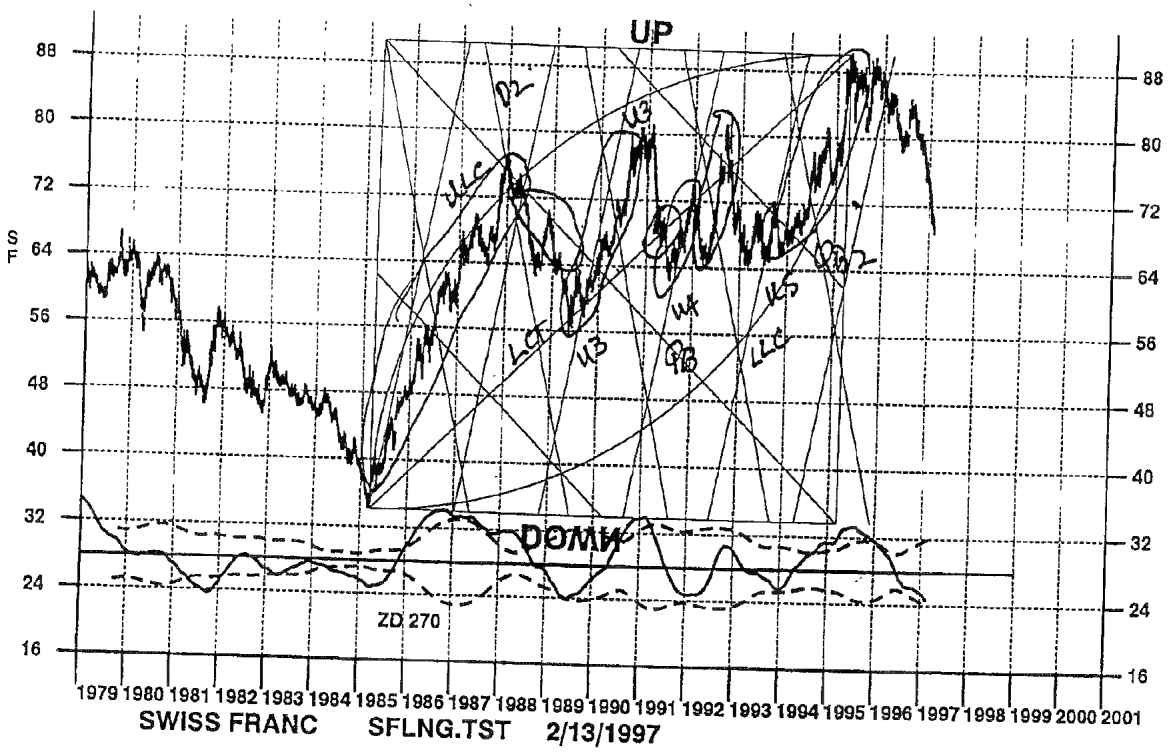


Figure 30.

strong rally to retest the highs. That rally collapsed back down into the line of central tendency until it was lifted by upstreak 4, leading to the 3rd retest of the highs. The pullback from that streak followed the quarter bar, QB2, down until it reached upstreak U5. That started the upward motion which was caught by the lower limit cycle, leading to the blowoff rally above the 3 previous highs, up to a price just above 90.

Multi-year fractal patterns also show up nicely in the grain markets. Figure 31 shows a ***Fractal of Pi*** pattern in wheat. This pattern is forecasting significant highs in wheat early next century.

Wheat is a fairly streaky commodity and is a good market in which to apply the ***Fractal of Pi*** pattern. This particular fractal had a strong move up along U1 in the upper limit cycle. It then pulled back to the line of central tendency, and rallied until caught by D1. It rallied again up into the quarter bar, broke above it, but was pushed back by downstreak D2.

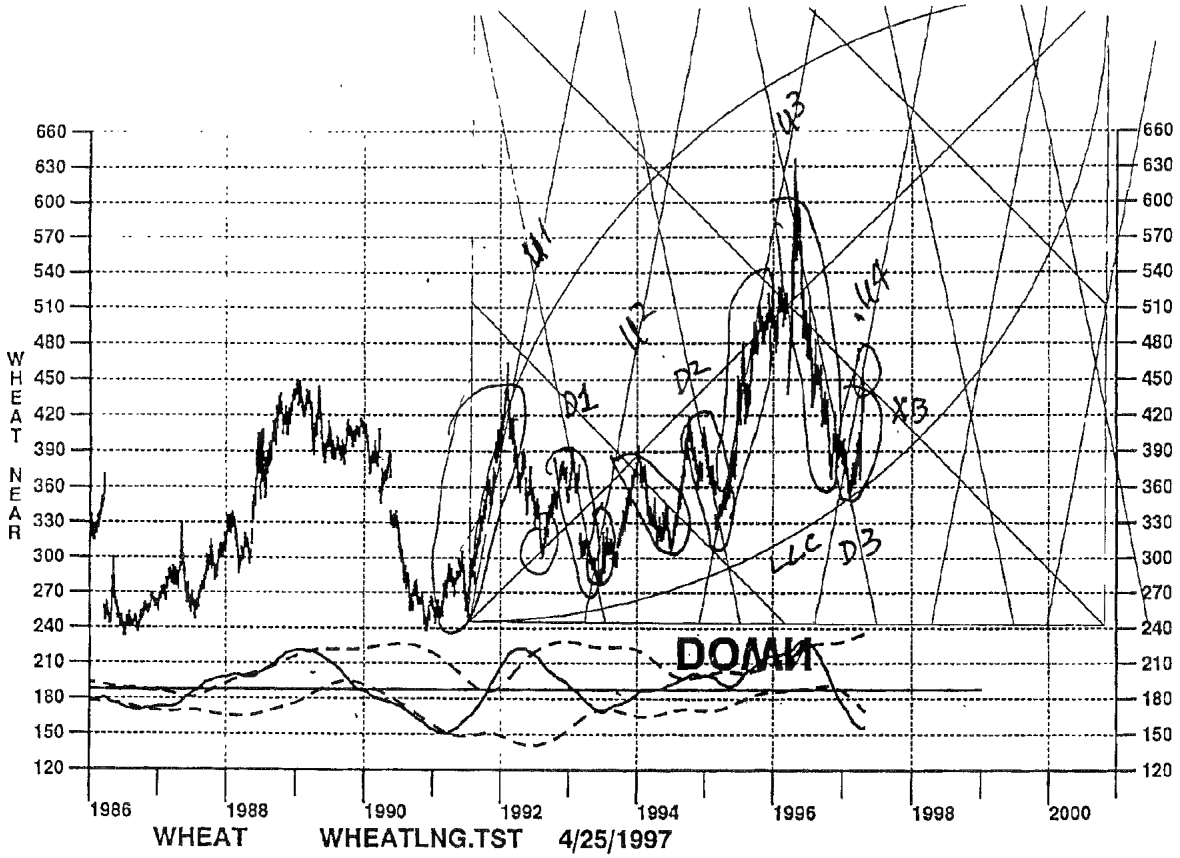


Figure 31.

From the intersection of D2 and U3, it staged a strong rally, carrying prices up by $3.00. This occurred along upstreak U3. This sharp rally, however, collapsed just as sharply along downstreak D3. That continued until it reached the lower limit cycle which caught prices and turned them up. Then they rallied along upstreak U4 to the crossbar. We used the ***Fractal of Pi*** pattern to catch this last move, buying near the lower limit cycle and cashing in when prices reached the crossbar.

So one can see that the ***Fractal of Pi*** pattern occurs in all markets. That is because all markets are driven by the energy fields. ***The Fractal of Pi*** patterns can cover a a few hours, a few days, a few months, or a few years. Each size is one layer in the multilayed fractal.

So it is a very good general description of market behavior. Now for some more examples in the S&P 500 market.

Figure 32 shows one possible ***Fractal of Pi*** pattern in the December 1996 through February 1997 S&P 500. This pattern was found primarily by matching the streaks, paying attention to the streak spacing.

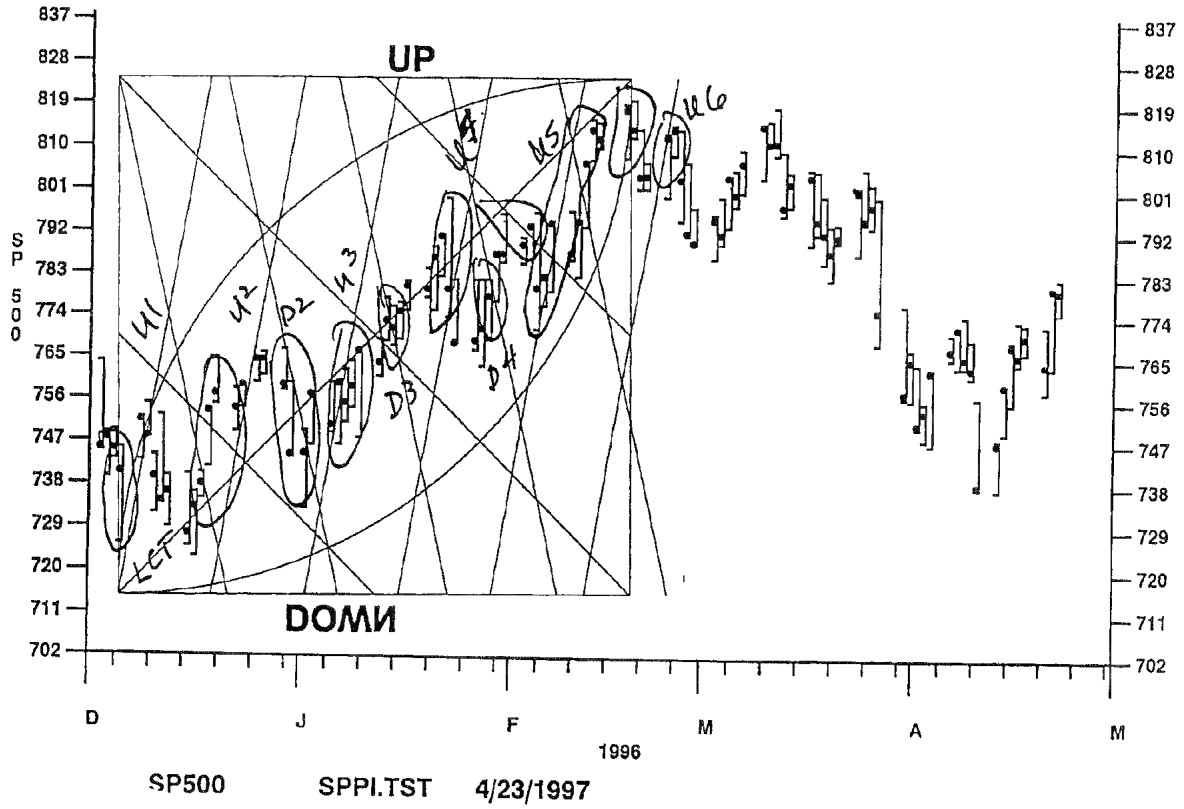


Figure 32.

The pattern began with a move along upstreak 1, followed by a decline into the line of central tendency. Then came a rally roughly along upstreak 2 and a sharp decline of 3 days along downstreak 2.

Upstreak 3 brought prices right back to the line of central tendency, which they continued to climb along into upstreak 4 and downstreak 4. Prices then congested along the quarterbar until caught by upstreak 5. This brought them up along the line of central tendency and into the end of the fractal pattern. Upstreak 6 caused a minor 2 day rally following the completion of this fractal.

Figure 33 shows the ***Fractal of Pi*** that followed. It began with a 3 day move down along D1, a rally back up to the line of central tendency, and further decline until lifted along QB1. At the intersection of the upper limit cycle and D3, the market turned down, dropping sharply along D3. Then it rallied along the quarter bar. The rally began when prices encountered U3. At the intersection of the quarter bar and the upper limit cycle, prices broke down sharply to the intersection of the line of central tendency and upstreak U5.

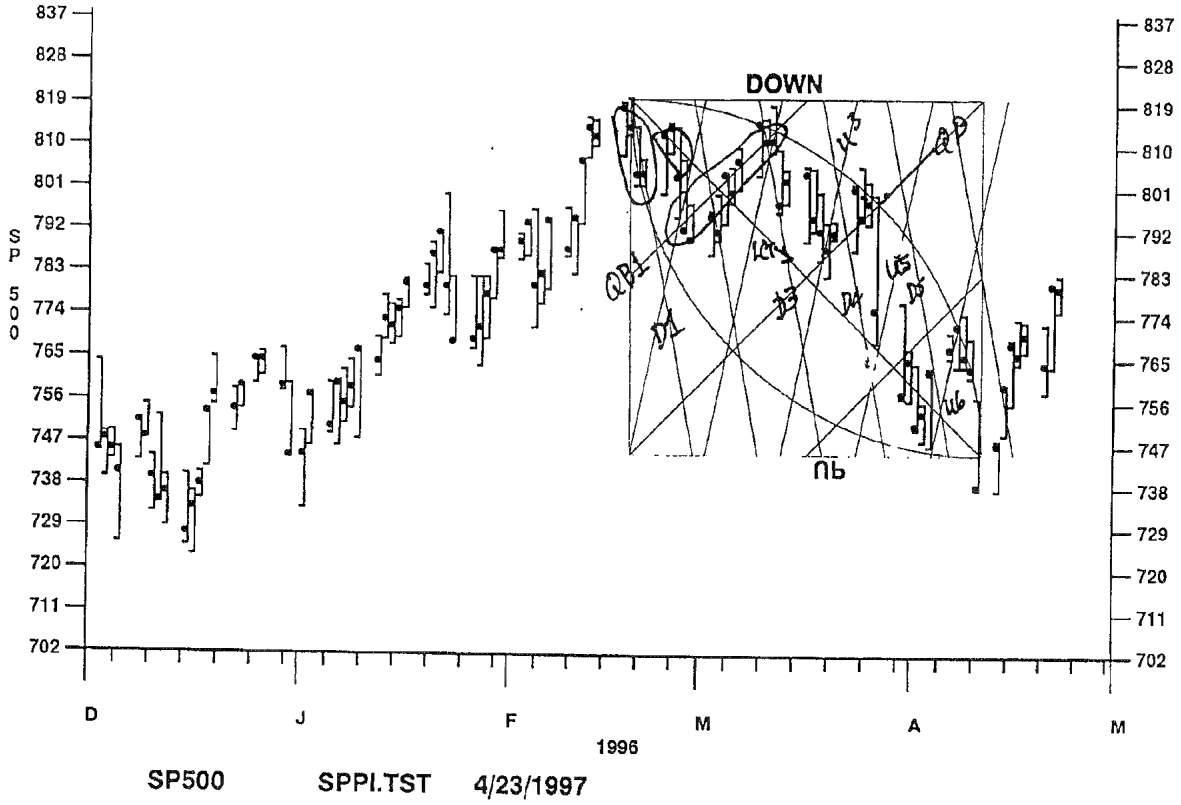


Figure 33.

One of our nice hotline trades caught this one day move using this ***Fractal of Pi*** pattern. We sold at 792 on a stop under the market anticipating a breakdown from the upper limit cycle, with instructions to cash in at 772 because of the anticipated drop into the line of central tendency and the anticipated rally along upstreak U5. That one day quick pick was a nice $10,000 trade based on the ***Fractal of Pi***.

The market further declined as it approached downstreak D5, broke down through the second quarter bar, and declined all the way into the lower limit cycle. It then rallied sharply along upstreak U6, until it turned down along the upper limit cycle, making a final one day plunge right at the end of the fractal.

Daily charts for the S&P are adequate for finding ***Fractal of Pi*** patterns which last over many weeks. However, for closer work, one needs to use charts that provide more detail.

One of the most useful charts that I have found displays intraday data over the last 10 trading days. On this chart, 6 and 8 trading day fractals show up frequently. Figure 34 shows one such fractal pattern.

It started with a rally near upstreak U1, and congestion sideways into the line of central

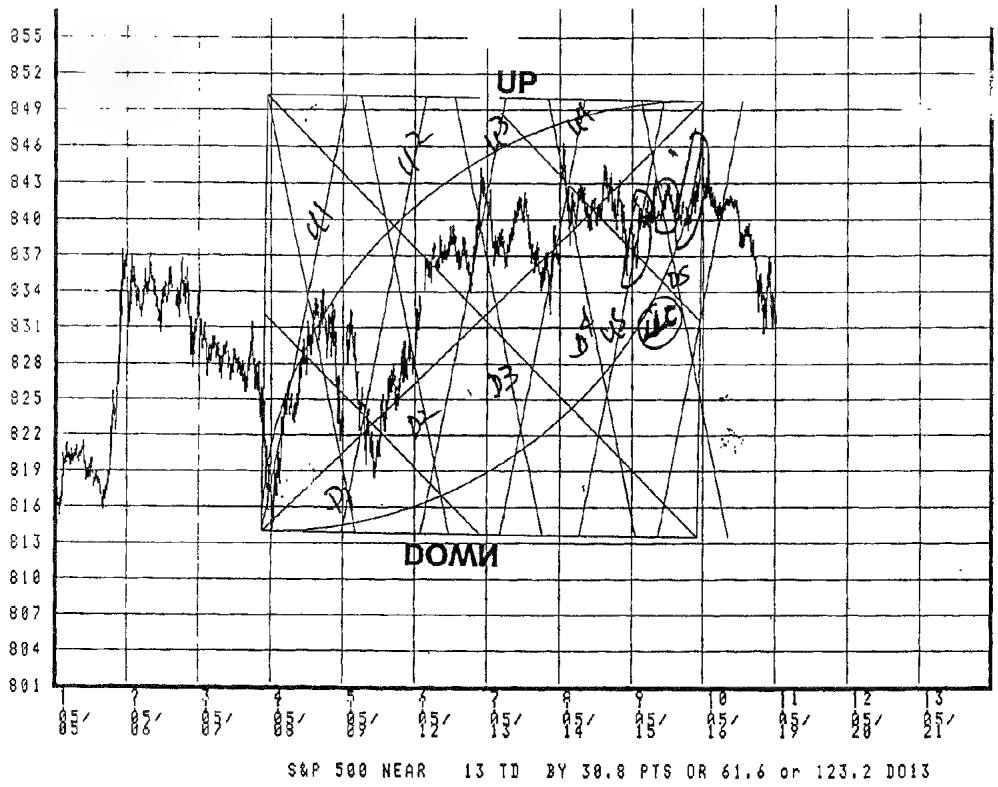


Figure 34

tendency. The second day started with a gap up above the crossbar, and a congestion sideways into upstreak 2. This triggered a rally, which was finally turned back modestly at downstreak 2.

On the third day, this rally broke above downstreak 2 and rallied up into the crossbar. There it congested and declined until being caught by upstreak 4 on the fourth day. On the fifth day prices congested sideways until rallying near upstreak 5. On the sixth day, they turned down along D5 only to be caught by the upcoming lower limit cycle. This produced a sharp rally to complete the fractal at the end of day 6.

This 6 day fractal can be used by short term traders who carry a position between 3 and 6 days and by option traders who can put on a position during day 2, trying to hold it into day 6. Shorter term traders can use the pattern as a filter for looking for fractals on an intraday chart.

Figure 35 shows another 6 day fractal in the S&P 500.

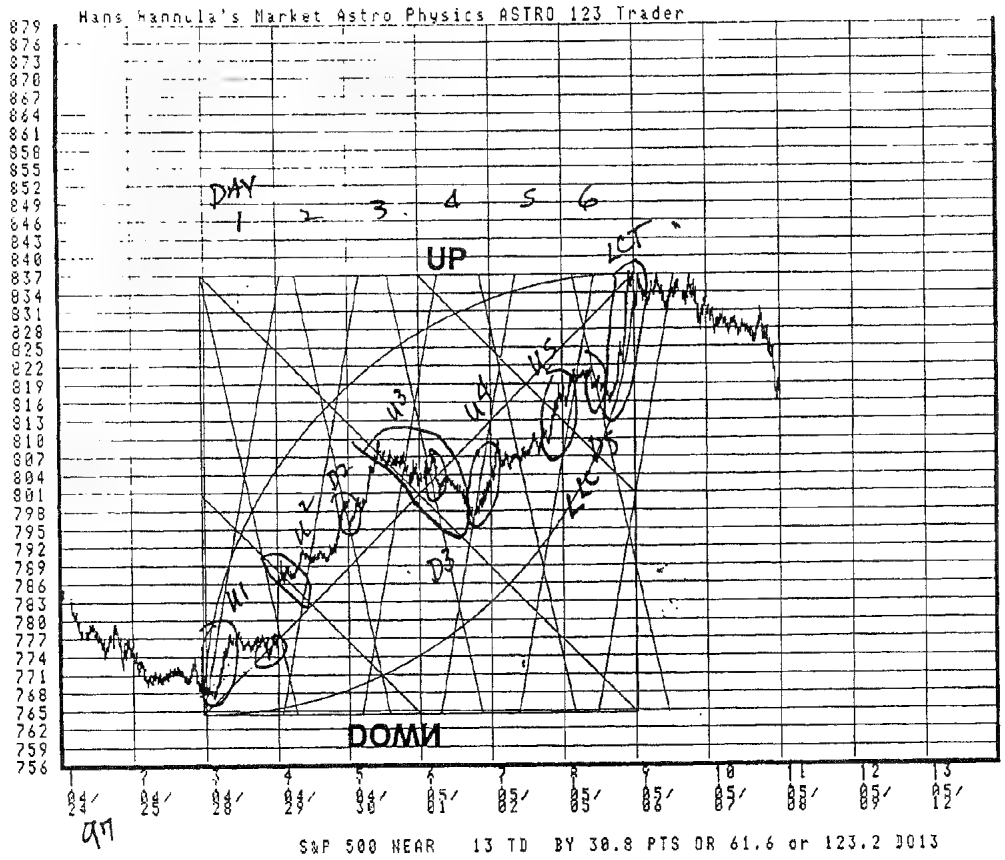


Figure 35.

It began with a sharp move along upstreak 1 and the upper limit cycle. Downstreak 1 turned prices sharply down on the afternoon of the first day. Prices congested into the crossbar and the line of central tendency on the second day. They began to rally along the line of central tendency, closing right at the downstreak 2 level. On the third day they rallied sharply up into the crossbar and caught an afternoon rally on upstreak 3.

On the fourth day prices declined away from the upper limit cycle, down into the line of central tendency, until caught late in the day with a rally along upstreak 4. On the fifth day prices opened gap up, but declined sharply along downstreak 4 and congested upward along the line of central tendency. They declined along the quarterbar into upstreak 5. On the sixth day of this fractal, prices rallied along upstreak 5, declined along downstreak 5, and then rallied with the final blowoff rally along the lower limit cycle.

I was fortunate enough trade on day 6 of this fractal, and to catch the final blowoff rally using the ***Fractal of Pi*** pattern. The U5, D5 lower limit cycle portion of the pattern is a pretty good setup to trade. Of course, one should not try to trade this strictly from the 6 day fractal pattern, but use the 6 day fractal pattern to anticipate the general activity for the day and refine the trading using a shorter term chart.

The charts I find most useful are those that cover 2 S&P trading days.

Figure 36 shows one such chart, with a one day fractal pattern down. In the morning the market moved down along the line of central tendency. Minor features can be noticed with a minor rally near upstreak 1 and sharp decline along downstreak D2. Streaks U3 and D3 are barely visible in the pattern. It was not until prices reached the crossbar and rallied

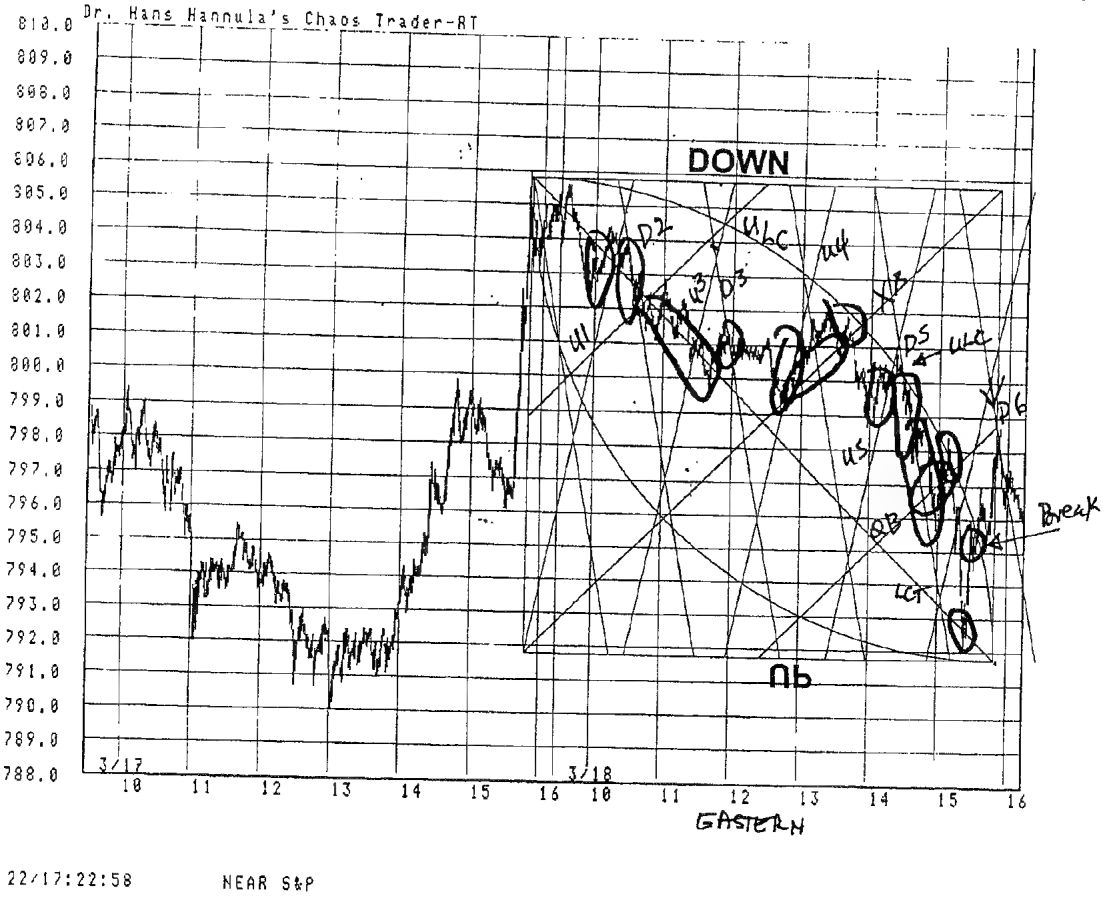


Figure 36.

along U4 that the fractal began to come clear. As prices approached the upper limit cycle, along the crossbar, they broke down sharply. They rallied along upstreak 5 until they reached the upper limit cycle, and were then thrust downward by downstreak D5.

This decline carried below the quarter bar, but rallied back above the quarter bar to bring prices up to the upper limit cycle. They again dropped from the upper limit cycle all the way down to the line of central tendency. The final rally broke through the upper limit cycle, terminating the fractal.

Many moves in the S&P begin after 2:00 o'clock Eastern time (shown as 14 on the chart). This particular day had a good trade setup at the intersection of U5, D5, and the upper limit cycle. Placing a sell stop under prices at that point would have led to catching the downstreak with cash in points at the quarter bar and at the last congestion on the line of central tendency.

Not all fractal patterns occupy a full day. In fact, it has been found that a fractal pattern may last 3 hours to 6 hours, and there are many fractals that occupy 4 1/2 hours. The length of the fractal depends upon which harmonic of the 24 hour cycle is working. The three hour fractal, for example, comes from the eighth harmonic of the day.

One 4 1/2 hour fractal is shown in Figure 37. This fractal rallied along U1 and U2, declined along the crossbar, and resumed its rally along U3 and U4, reaching the quarter bar, where it declined moderately for 20 minutes. It rallied along the line of central

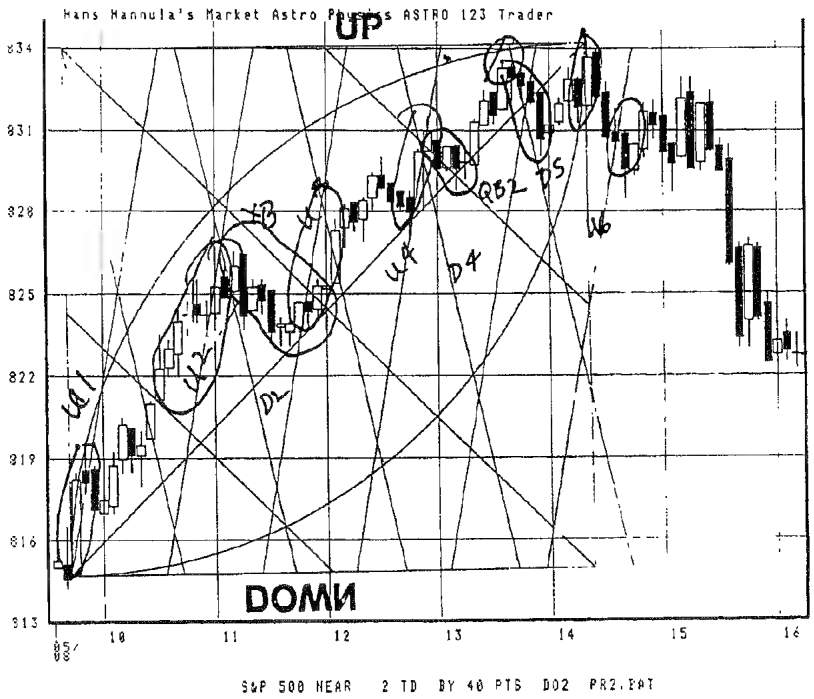


Figure 37.

tendency until it was turned down sharply by streak D5. It then rallied to complete the fractal at the end of fractal point. U6 caused a minor rally after the end of the fractal.

From there the market declined sharply into the end of the day. Again notice how this rally terminated between 2:00 PM and 3:00 PM Eastern. This "death zone" occurs because it is a common point from many fractal sizes. A four hour sixth harmonic cycle centered on solar noon ends here. A six hour fourth harmonic fractal from the open has its U5,D5, ULC and D4,U5,LLC set up points here. An eight hour third harmonic fractal from the open has its QB2 and ULC or LLC intersection here. You can use the ***Fractal of Pi*** to find trades here, using the details of the pattern to project profit potential.

In my own experience, catching this late reversal between 2:00 and 3:00 in the S&P has been one of the better uses of the ***Fractal of Pi*** pattern. I have always found it relatively easy to catch the sharp declines from this point, such as the one shown here along D4, only to have the market turn sharply in the other direction, taking away my gains. That changed when I discovered the ***Fractal of Pi.***

The ***Fractal of Pi*** pattern explains why the sharp move can occur, and when it can occur,and how far it might go. There is no assurance that it ***will*** occur, given the chaotic nature of markets. However, a ***Fractal of Pi*** pattern properly fit and recognized can greatly aid the placement of your stops in such a way that you can catch these streaks.

The secret to making money, of course, is to catch streaks in your favor, but place your stop orders in such a way that you never let a streak run against you. More on trading techniques will be covered in a later chapter. Before that, though, I must dampen your enthusiasm with some ***nasty realities*** from the real world.

Behaviors of the Fractal of Pi

The ***Fractal of Pi*** pattern is an energy pattern that is present in all markets. It gives a fairly complex description of a very complex system. By using graphics, the pattern's complex structure can be easily recognized by most people. ***Nothing is as good at pattern matching as the human brain with its ten billion neuron neural network.*** By understanding the pattern's behaviors, you will prepare yourself for applying the ***Fractal of Pi*** to your trading. It has some imperfect behaviors, which you need to understand so that you can cope with them when they occur.

As explained previously, the energy fields which drive markets work together to form periods of harmony and disharmony causing the rallies and declines. However, if you will recall, we derived the ***Fractal of Pi*** pattern from a model of only two interacting fields. This is a necessary simplification. We had to make this simplification to gain understanding of the problem. That led us to some very profitable results-very useful. However, these results are not perfect.

There are many behaviors in markets which fit into the theme of energy adding by harmonics, yet which don't quite perfectly fit the ***Fractal of Pi***, or any other pattern for that matter. In this chapter we will review several of the behaviors of the ***Fractal of Pi*** pattern which tend to reoccur. These are not really failures of the ***Fractal of Pi***t pattern but an acknowledgment of the simplification we have made in order to gain an understanding of an extremely complex system.

Let me start with a fractal that seems to be working perfectly. Figure 40 shows the S&P 500 during April of 1997.

An up fractal started on the 14th, with a move following the upper limit cycle. On the 15th upstreak 1 carried prices higher until downstreak 1 forced them lower. Later in the day

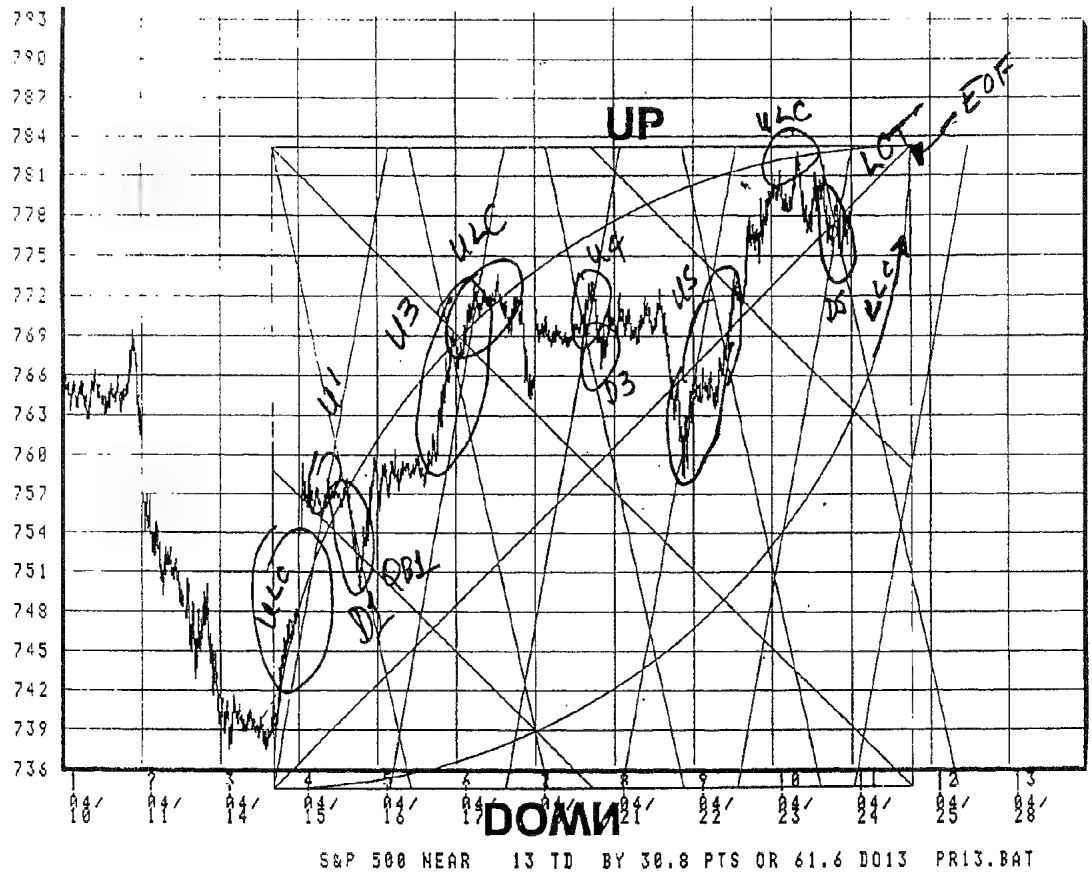


Figure 40.

prices rallied off of quarter bar 1. On the 16th they rose higher along upstreak 3. On the 17th they continued this rally on upstreak 3 until stopped by the upper limit cycle. They then congested sideways with a minor rally on U4 and a minor decline on D3.

On the 21st prices dropped sharply until caught by upstreak 5. On the 22nd this rally continued parallel to upstreak 5, reaching the upper limit cycle on the 23rd. At the close on the 23rd prices had pulled back along D5 but had congested along the line of central tendency. Therefore, one could expect that on the 24th that prices might rally to retest the highs either along the LCT or along the lower limit cycle. So all one had to do was to wait for the perfect end of fractal and go short with a very low risk trade.

On the 24th, however, prices opened sharply higher at the intersection of U5 and the upper limit cycle. From there prices declined and rallied only weakly along the lower limit cycle. ***This fractal had terminated early.***

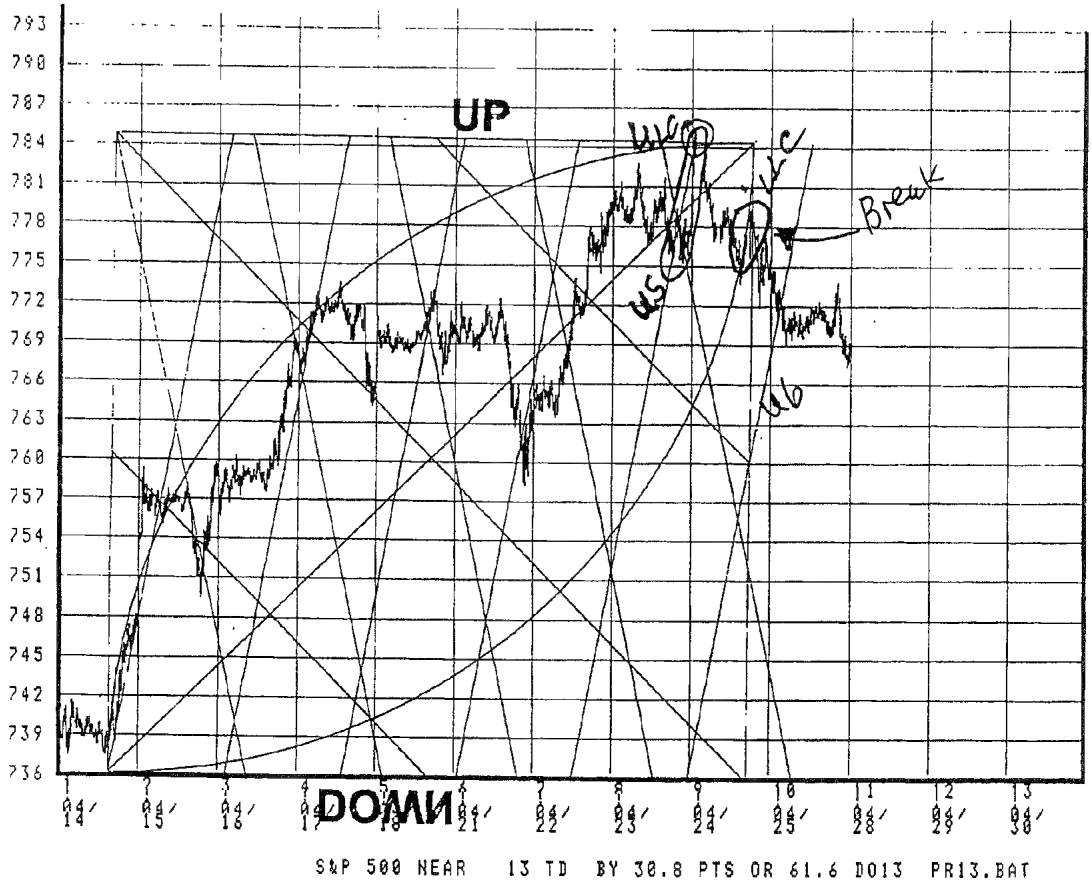


Figure 41.

This is an example of how the end point of a fractal may behave like a hot stove which is attractive, but too hot to touch. This is typical of the strange attractors/strange repellors in markets. It produced this example of early termination.

Now let us look at another form of early termination. Figure 42 shows a daily chart of the S&P 500, with a fractal that started up in January of 1996.

A ***Fractal of Pi*** of the size shown looked to be fitting very well. The streaks U1, U2, and U3, as well as U4, were very clear. Also, down moves D2 and D4 seemed to fit, and the

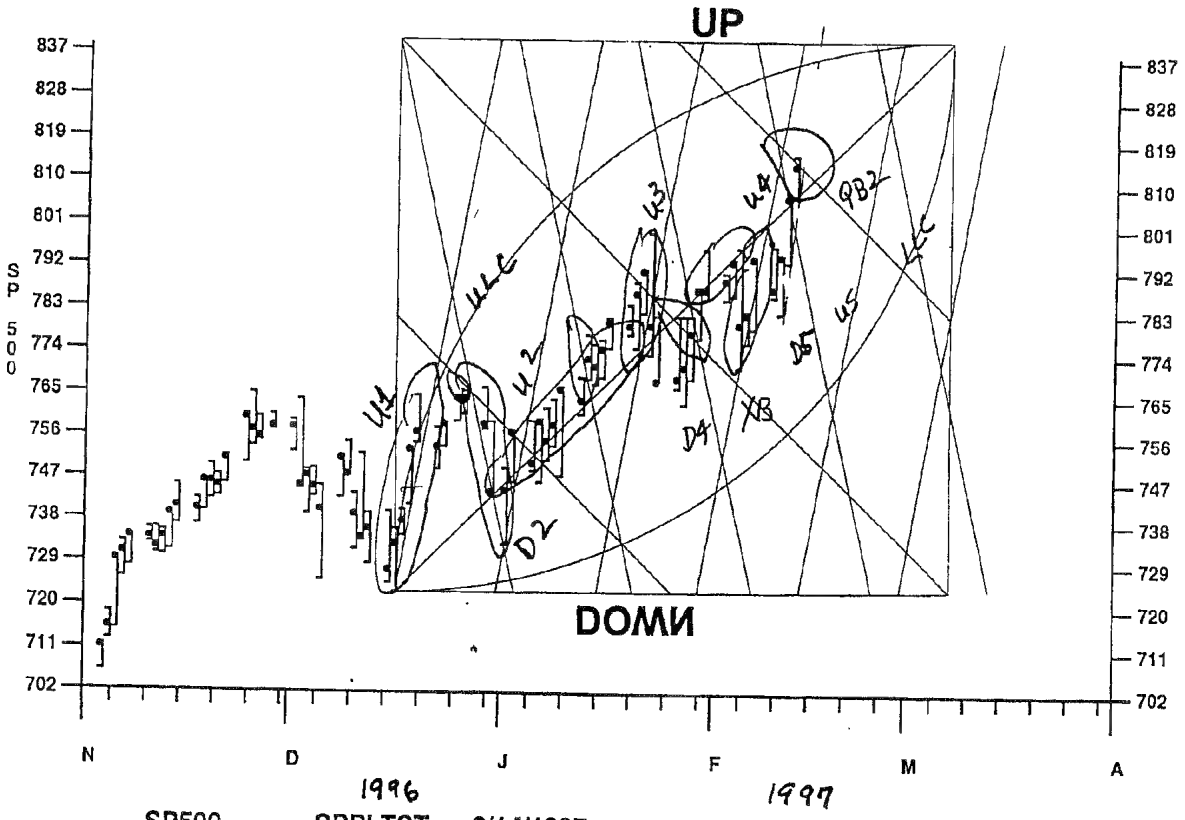


Figure 42.

crossbar area was evident. At the time that this chart was made prices had reached QB2, the upper quarter bar.

This would lead one to expect a pullback along the quarter bar or along D5 with a rally coming along U5 or along the lower limit cycle, leading to a high in early March.

Figure 43 shows what happened. Prices did decline along quarter bar QB2 and did rally up along U5 for two days. They then broke sharply downward back to the quarter bar. This break was enough to carry prices below the lower limit cycle at the point marked BREAK.

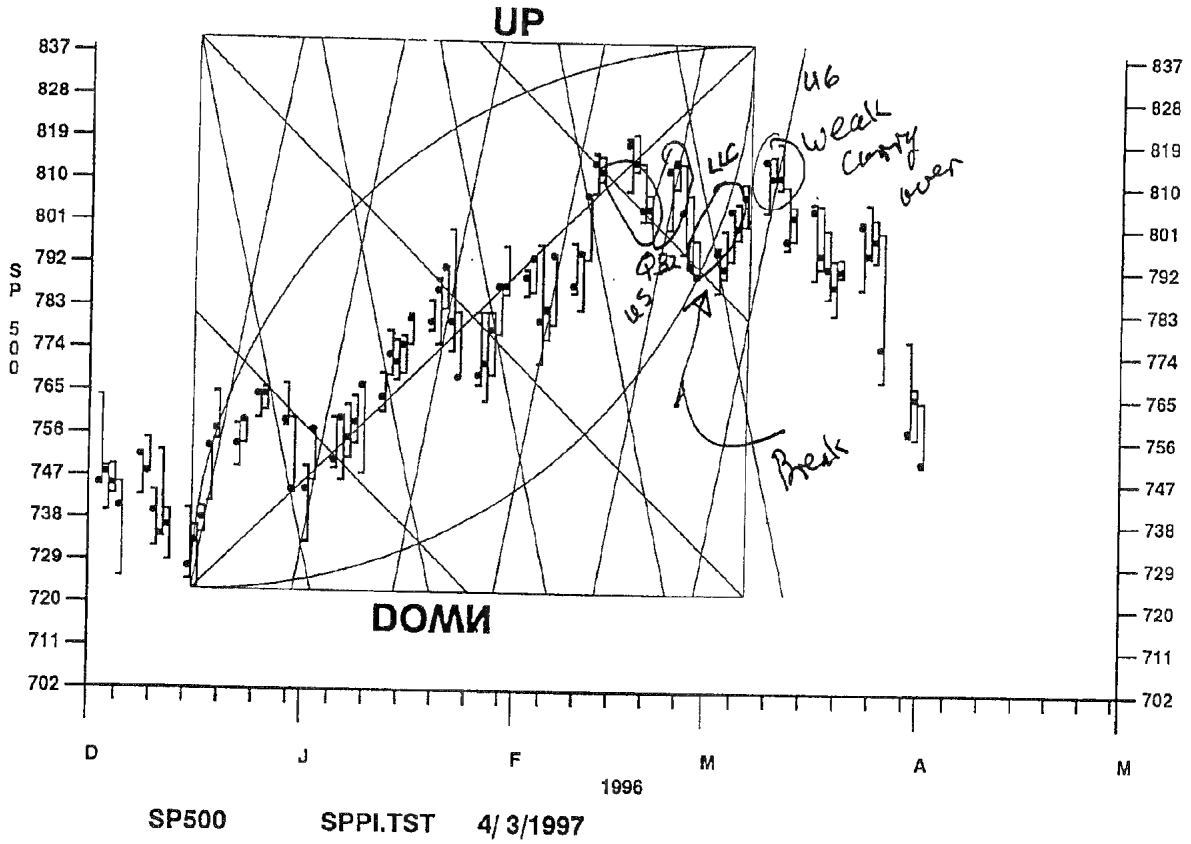


Figure 43.

Prices then rallied underneath the lower limit cycle, following its general curve. U6 carried prices weakly higher but not to new highs. From there prices dropped sharply. The fractal had fractured. Other energy inputs had come into this system that were changing the overall movement of the market.

This is not a shortcoming of the ***Fractal of Pi***. This is a consequence of an extremely complex system. Prices have a strong tendency to follow the ***Fractal of Pi*** pattern, but there is no absolute guarantee. If you are a person who expects absolute guarantees, you shouldn't be in the markets. They just don't provide it.

The last example shows how U6 can add a little energy after the end of the fractal. This I call the ***carry-over***. Figure 44 shows another ***Fractal of Pi*** pattern which has similarly

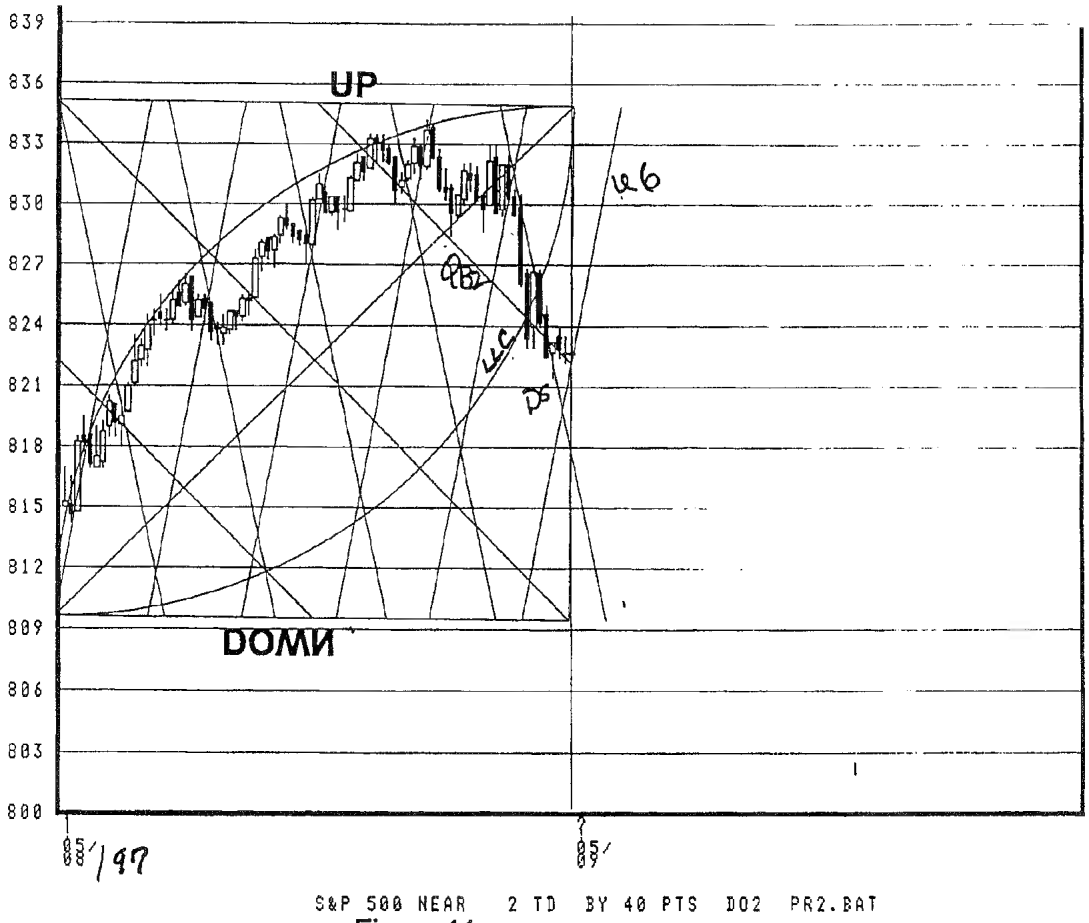


Figure 44.

reached the point where it has broken below the lower limit cycle along QB2 and D5. At the close of trading on May 8th, someone ignorant of the ***Fractal of Pi*** pattern may have been tempted to sell. However, someone who knew about the possibility of U6 causing a sharp morning rally would not hold a short position overnight.

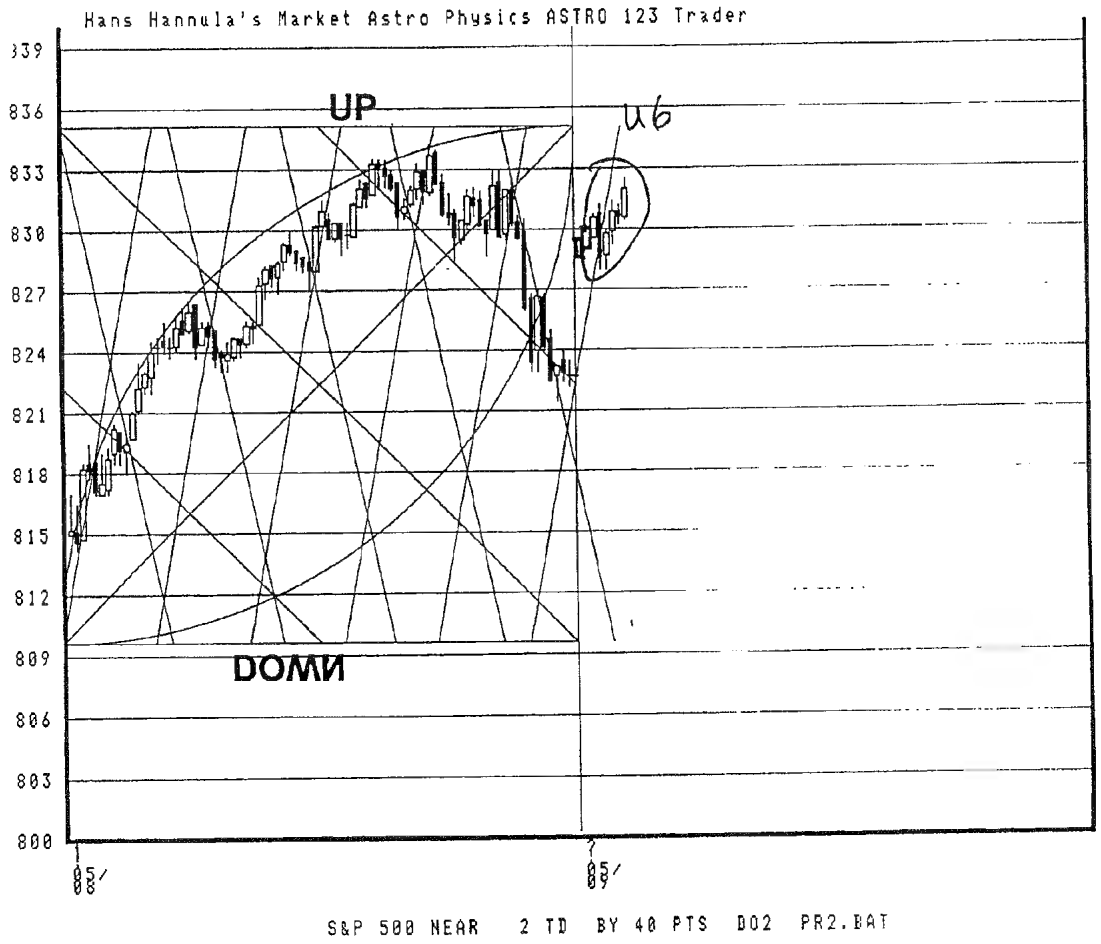


Figure 45.

Indeed, the market opened sharply higher, as shown in Figure 45. Then it rallied along U6.

Figure 46 shows another example of a rally along U6. This is an S&P 500 daily chart. So be alert for the carry over caused by D6 and U6. It will cause unexpected moves for the uninformed.

We will return to this example of carry-over when we discuss fractal enlargement.

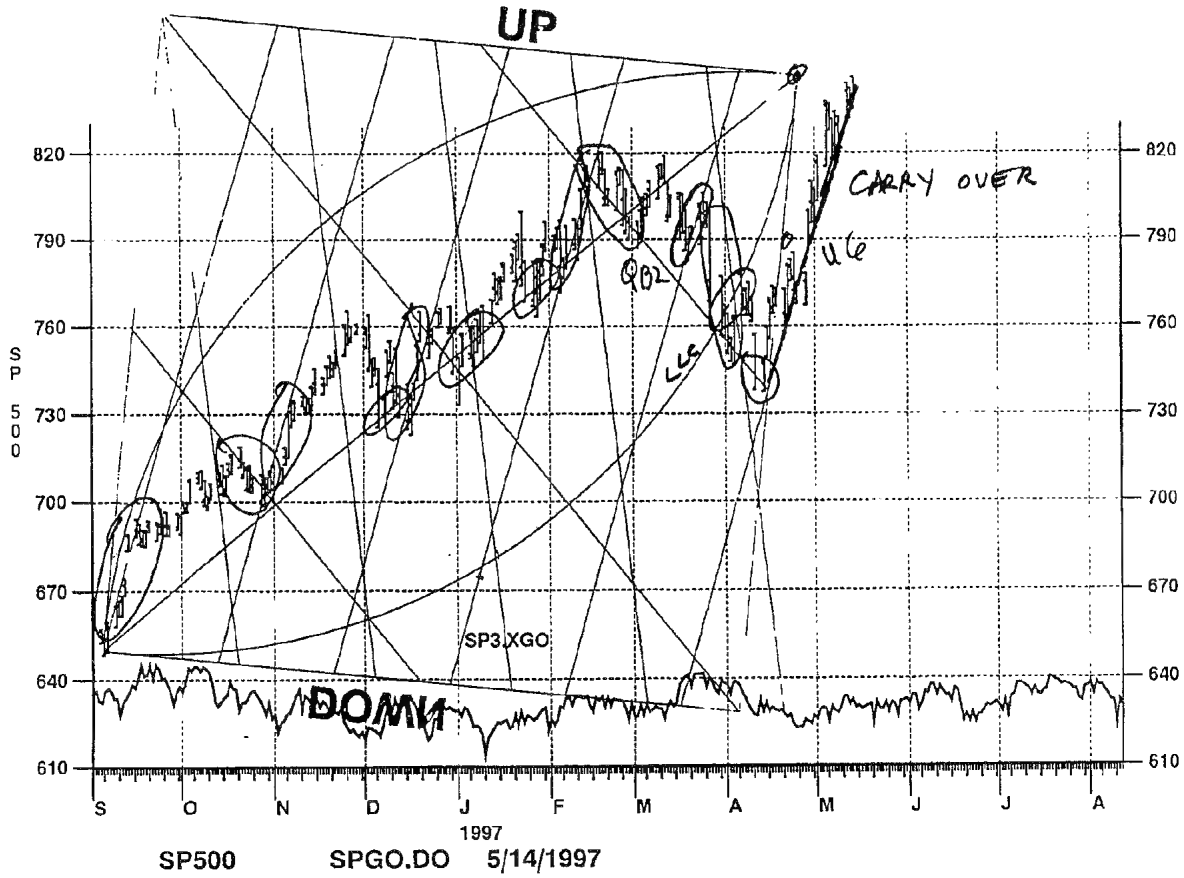


Figure 46.

Figure 47 shows a variation on the theme of U6 causing a carry-over. In this case the ***Fractal of Pi*** may have been sized a little too small. However, it fit very nicely up through move 6. In fact, it started move 6 up along the lower limit cycle. Then it seemed to suddenly die and go sideways.

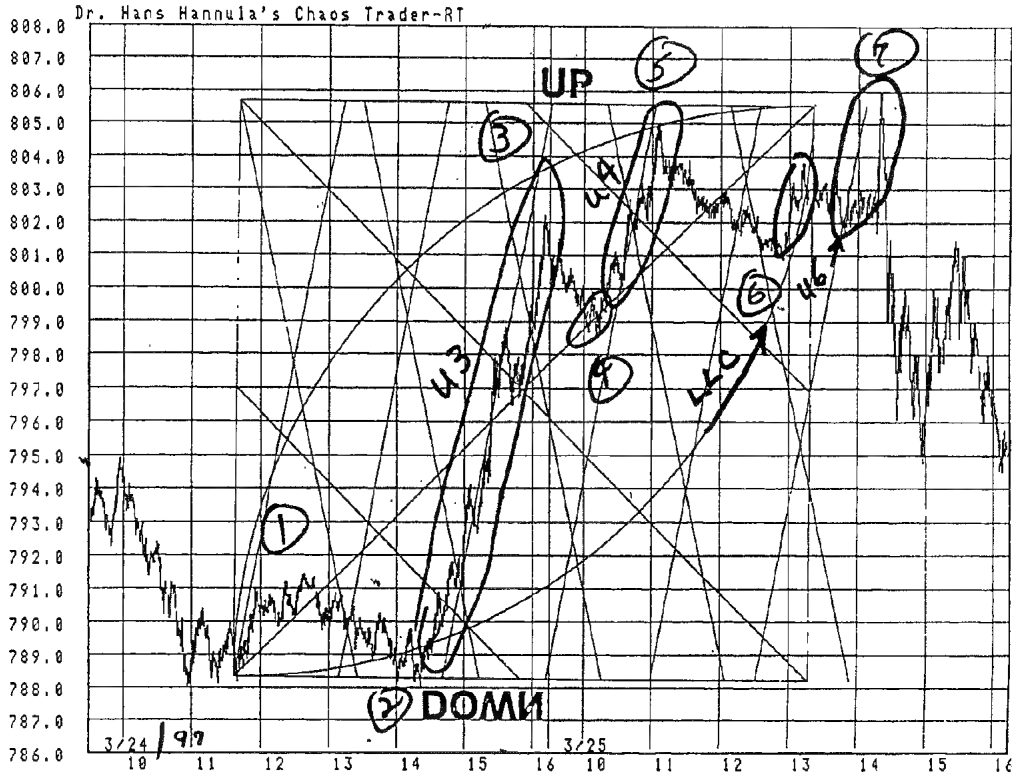


Figure 47.

However, when it encountered U6 it picked up upward energy. It continued sideward for another 20 minutes and then made a spike high at 7 and dropped like a rock.

This is an illustration where looking for the basic 7 moves would have helped you. That move 7 was not over until you saw the spike.

Figure 48 shows an interesting fractal that lasted eight days. On the ninth day the market congested sideways, seeming to go nowhere. Yet the fractal pattern had a very clear move 7. It was a sharp move along the lower limit cycle.

This sideward chatter I call ***fractal stutter.*** It ended at the end of U6. Prices were just

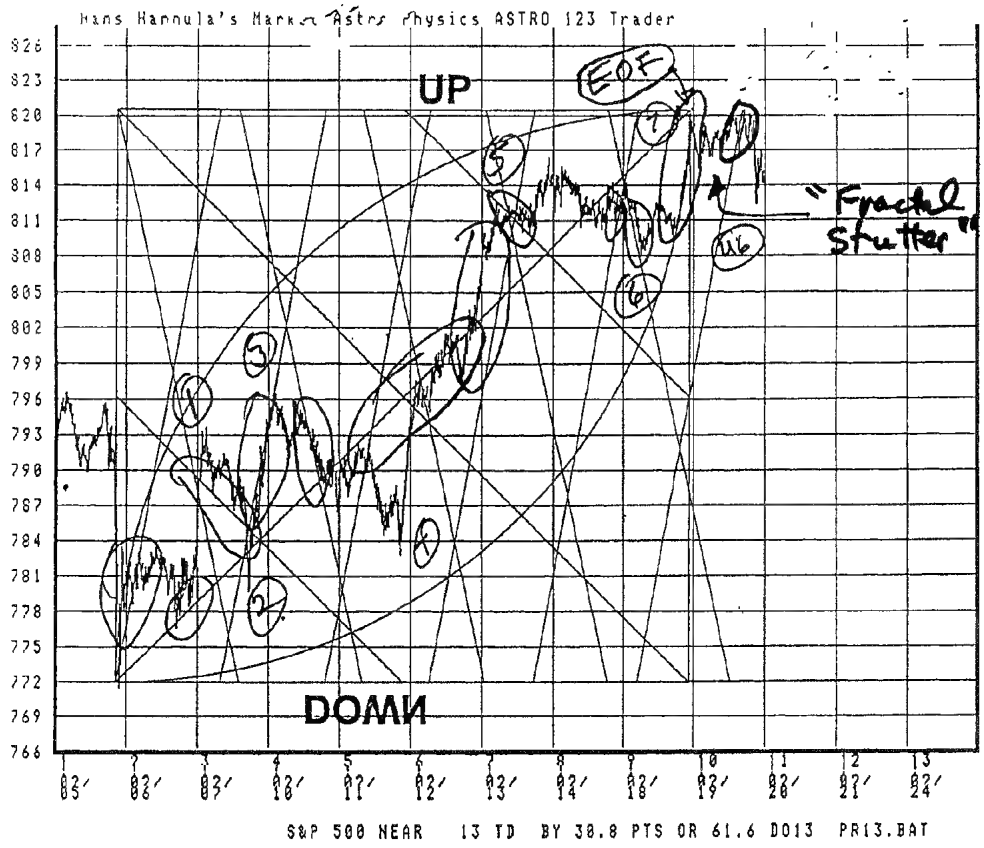


Figure 48.

trapped between the energy at the end of the fractal and at the top of U6.

Figure 49 shows another fractal which was forming a bottom down pattern. Late in the fractal, prices bounced off of the line of central tendency, up to the upper limit cycle and D5. However, they did not follow these lines down to the end of fractal. Instead they broke out sideward to the fractal.

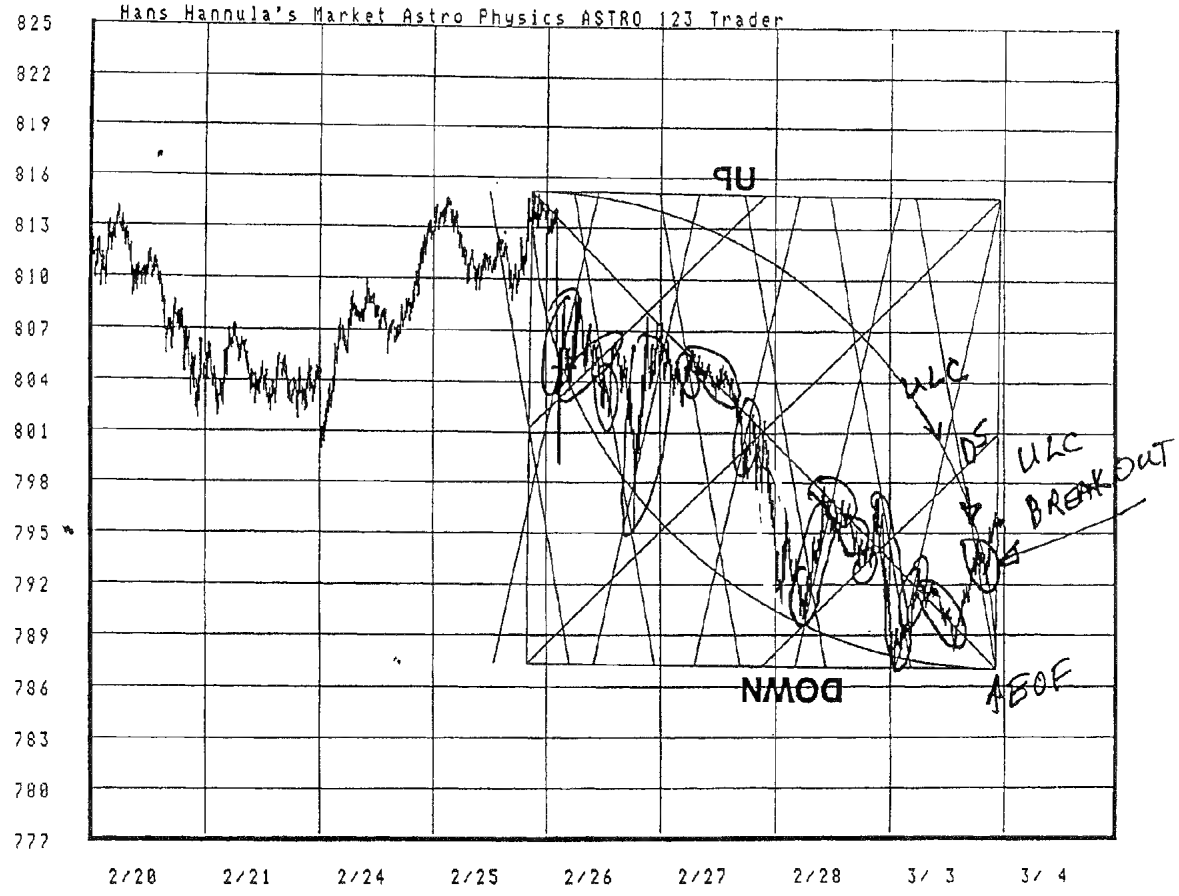


Figure 49.

This is another version of early termination similar to that discussed with Figure 40 except that this fractal was a downgoing fractal. The next day prices did head higher.

Figure 50 shows a fractal that seems to be progressing relatively well. This is an intraday fractal in the S&P 500. The market had broken down sharply late on May 8th. On May 9th prices started to decline along D2. The best alignment of a one day fractal seemed to be as shown.

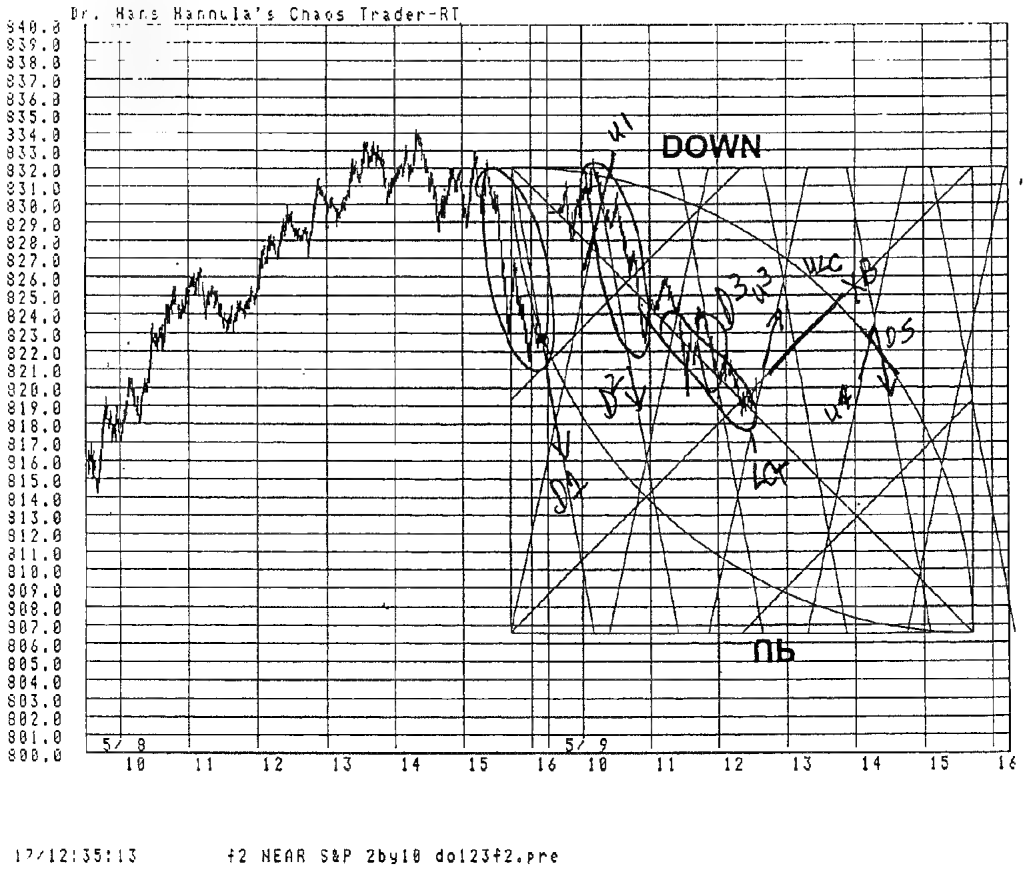


Figure 50.

Prices continued lower along the line of central tendency and D3 was sharp and clear. Prices then began to rally up along the crossbar when lifted by U3.

Aha! A good fractal pattern match and a possibility of selling short when we hit the upper limit cycle, especially if we can catch the U4, D5, ULC setup discussed previously.

Figure 51 shows the continued formation of this fractal. It did rally along U3, declined exactly along D4, and found support along the crossbar. So far, so good.

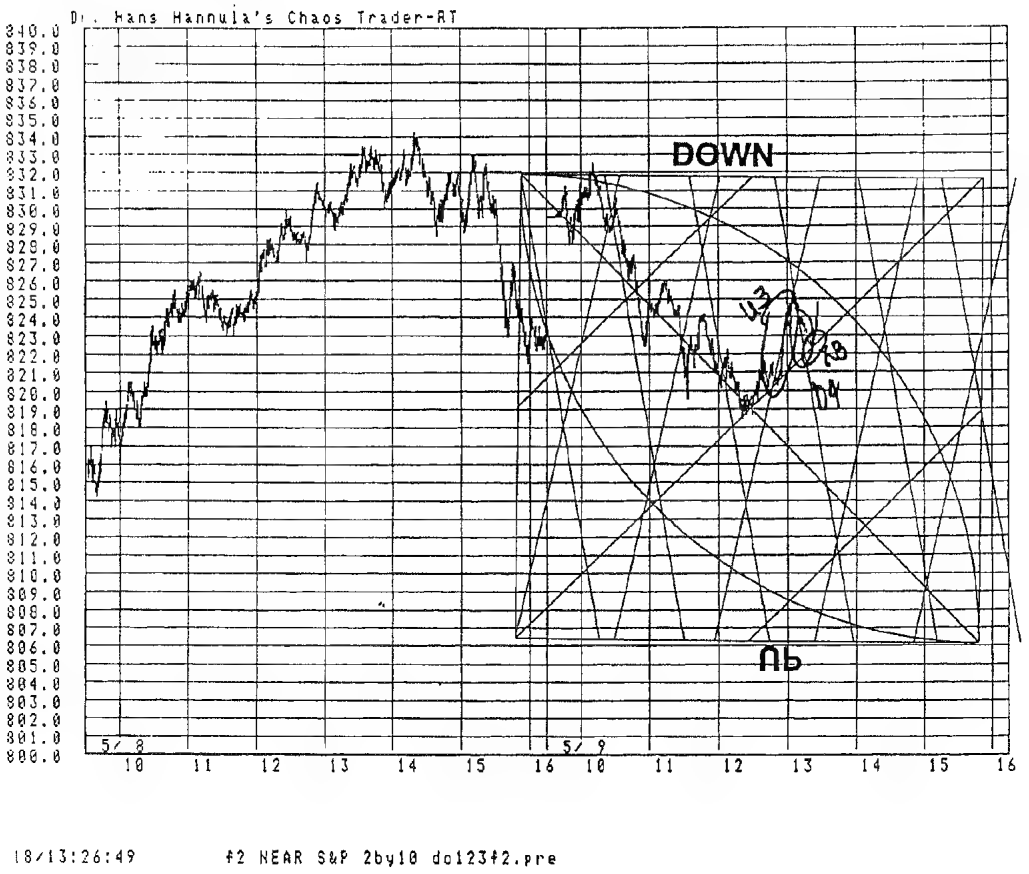


Figure 51.

Figure 52 shows prices a little later in the day. The rally had continued along the crossbar and had broken out above the upper limit cycle. This was a warning flag that the fractal pattern may not complete as anticipated.

Prices did start to follow D4 down. The question was whether or not they would break

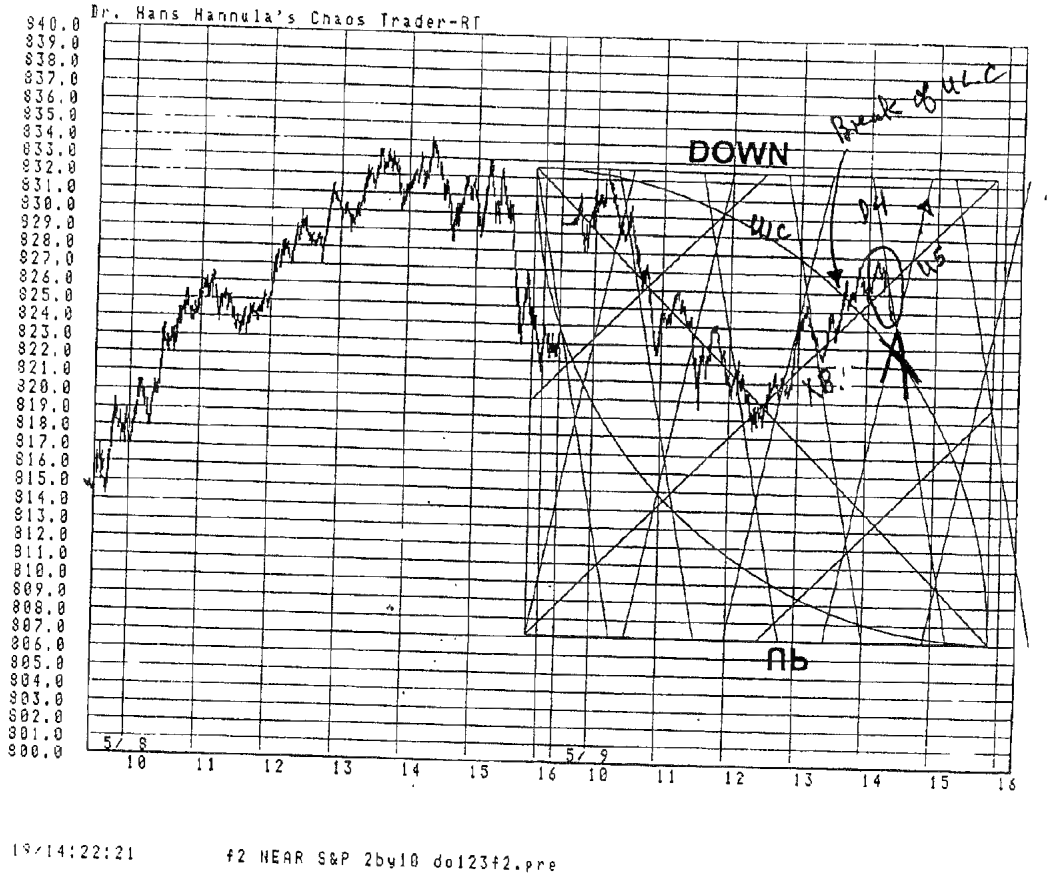


Figure 52.

back below the upper limit cycle and hit the point of our trade setup. If they turned up along U5, that possibility would be negated.

Figure 53 shows the outcome. Prices did not break below the intersection of D4 and U5, but turned up along U5 and continued to follow the crossbar. They made a minor decline along D5 and a late rally along U6.

This is a case of a ***crossbar breakout*** about the upper limit cycle. Usually when this

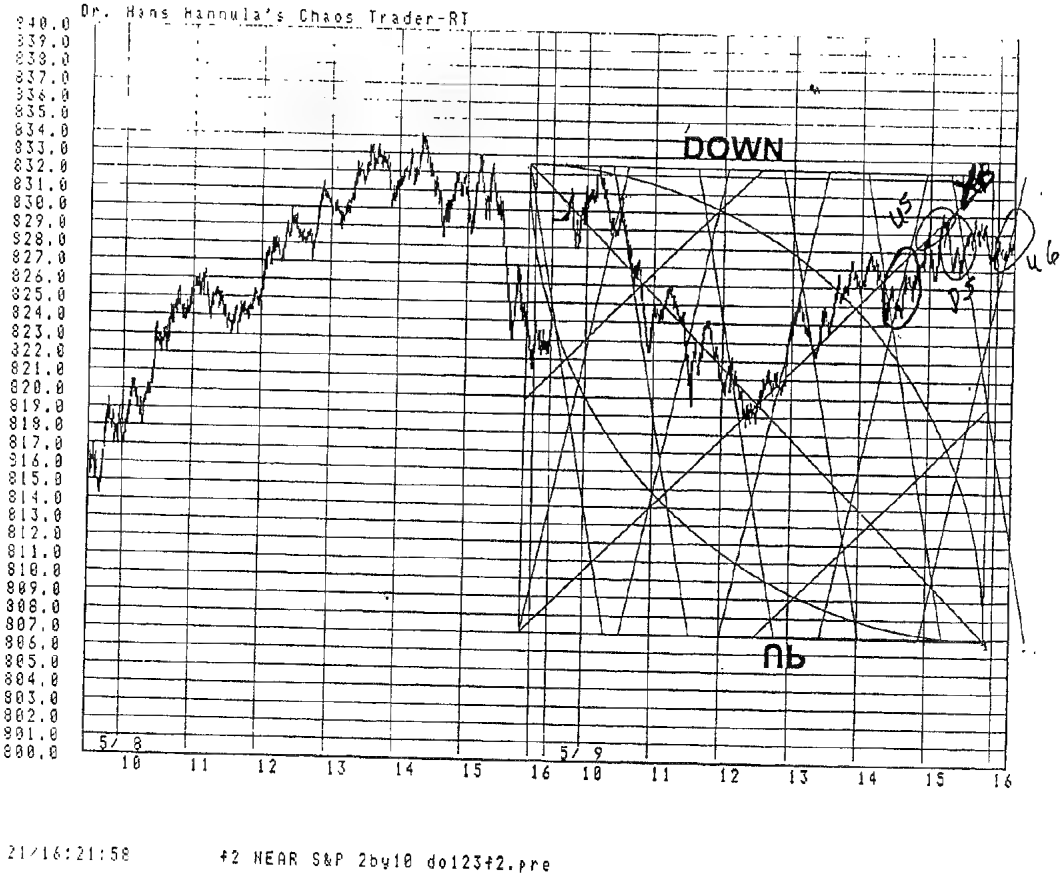


Figure 53.

happens the fractal pattern has fractured.

Notice in this case prices would have had to break below the intersection of U4 and D5 before I would have considered a short position. I have found it best to wait for prices to break above or below an intersection of lines in the fractal pattern before entering a trade. In fact, I use these intersections to place my stops.

Now let us look at an example in wheat. Figure 54 shows the daily chart of wheat futures along with our price forecast using our XGO function. For the time being ignore this price forecast (the lower line on the chart).

This fractal began quietly enough, with a modest rally along the line of central tendency,

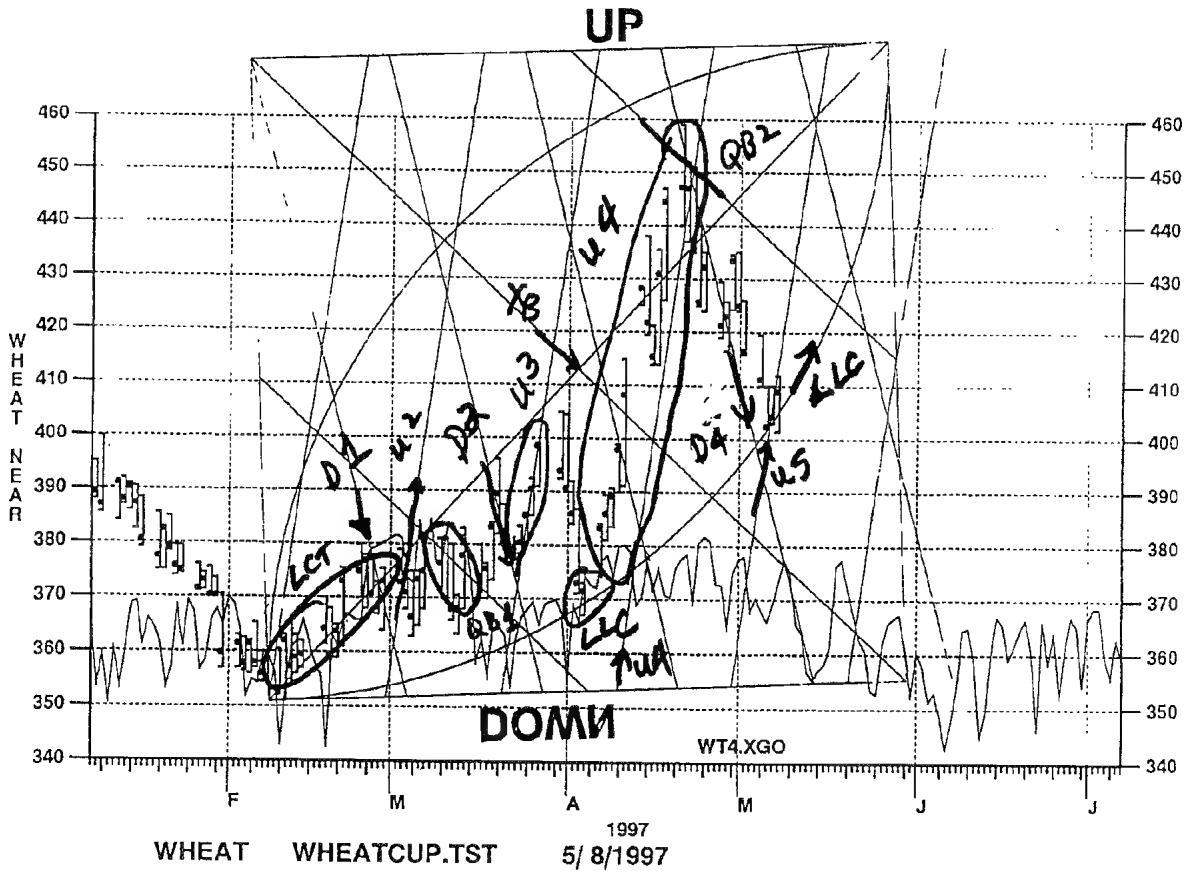


Figure 54.

minor decline on D1, and minor rally on U2. That was followed by a minor decline along QB1. Things began to get exciting when prices followed exactly U3. However, as they neared the crossbar, they dropped sharply down to the lower limit cycle.

At this point, anticipating a rally along U4, we placed a buy stop at 376. We caught the major part of the fast move up along U4, cashing in when prices hit the line of central tendency at 428.

Because we were aware of the presence of downstreak D4, we waited to see what the market would do before trying to take another position. As prices fell along D4 we were carefully looking for a buy opportunity where D4, U5, and the lower limit cycle intersect.

Chart 54 shows that prices did reach this intersection. They made a one day rally along U5. We decided to be conservative and place our buy stop at 420.

As shown in Figure 55, that buy stop was never hit. We were never elected long. It is a good thing, because prices did break down sharply, and drop over the next four trading days. This is how one uses the pattern to find the ***possibilities***, and then place stops to exploit those possibilities. One could also have placed a sell stop below the LCT in case of

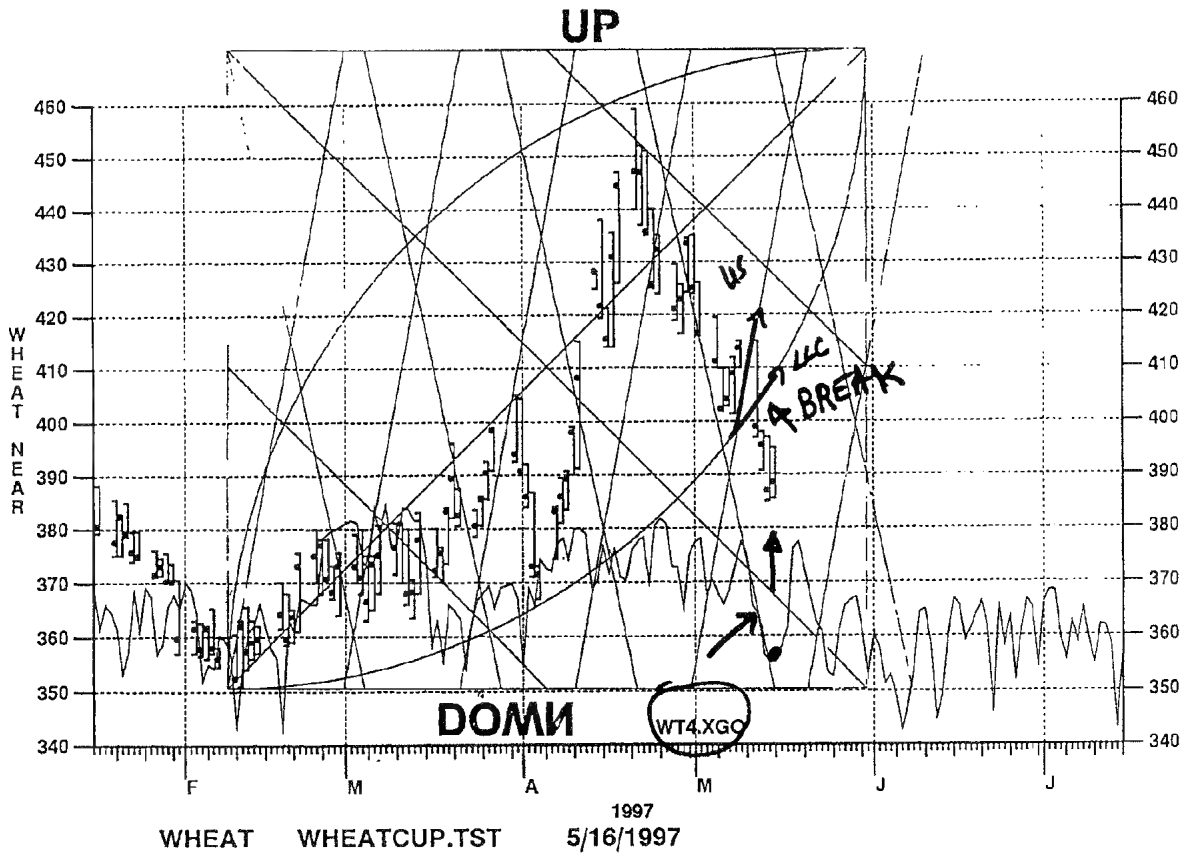


Figure 55.

a breakout.

This was a break below the lower limit cycle, indicating that our fractal had fractured. Notice how the XGO forecast had forecast this happening. It shows this four day drop. XGO is another trading tool which can be used independently or in conjunction with the ***Fractal of Pi***. Further discussion of XGO is beyond the scope and purpose of this course. Call or write for more information.

So far I have been giving examples where the ***Fractal of Pi*** square is oriented "straight up" on the chart. This is the normal case on a well scaled chart. One will, however, find fractals that appear to be tilted.

This occurs for two reasons. Either the chart is not scaled correctly or U6 has caused a tilt. Figure 56 shows a fractal that is forming relatively well.

It had rallied along U1, and pulled back along D1 into the quarter bar. U2 started a rally. It crossed the crossbar, and U3 brought the rally to the upper limit cycle. From there prices

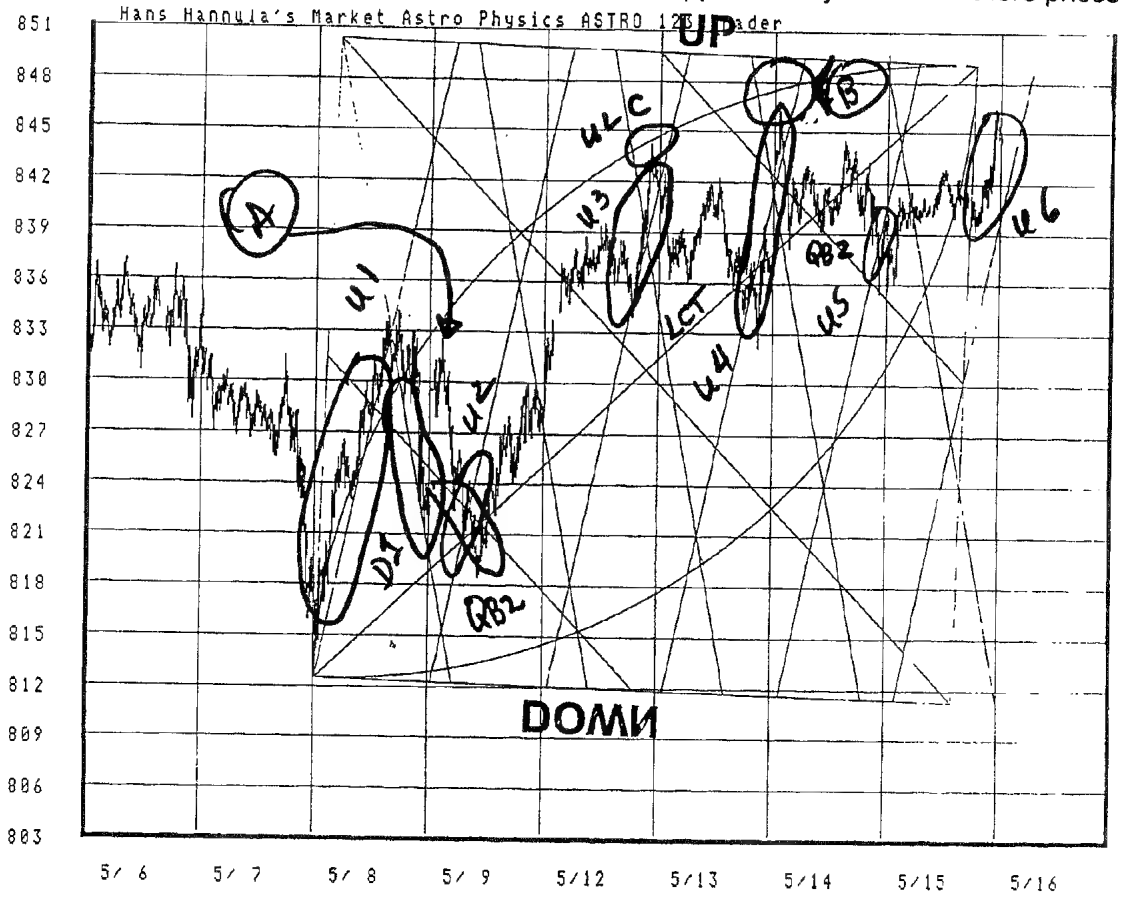


Figure 56.

moved sideways until caught by U4, which brought prices up toward the upper limit cycle. But at this point they did not quite reach the ULC as shown by the circled area B.

What could cause such a behavior? Well, there was a warning early in this fractal pattern that it was not the ideal fractal. At A prices formed a down thrust, not on D1, but parallel to it. This indicates some early shifting of the harmonics that were forming the fractal.

After failing to reach the upper limit cycle at B, prices declined along QB2 until they got a minor lift from U5. They also got a secondary lift at U6.

Figure 57 shows another alignment of this fractal pattern. It is made by tilting the pattern counter-clockwise. This alignment still produces a good fit with the points along the upper limit cycle and the line of central tendency. U3, U4,and U5 fit relatively well and the final move 7 does follow the lower limit cycle.

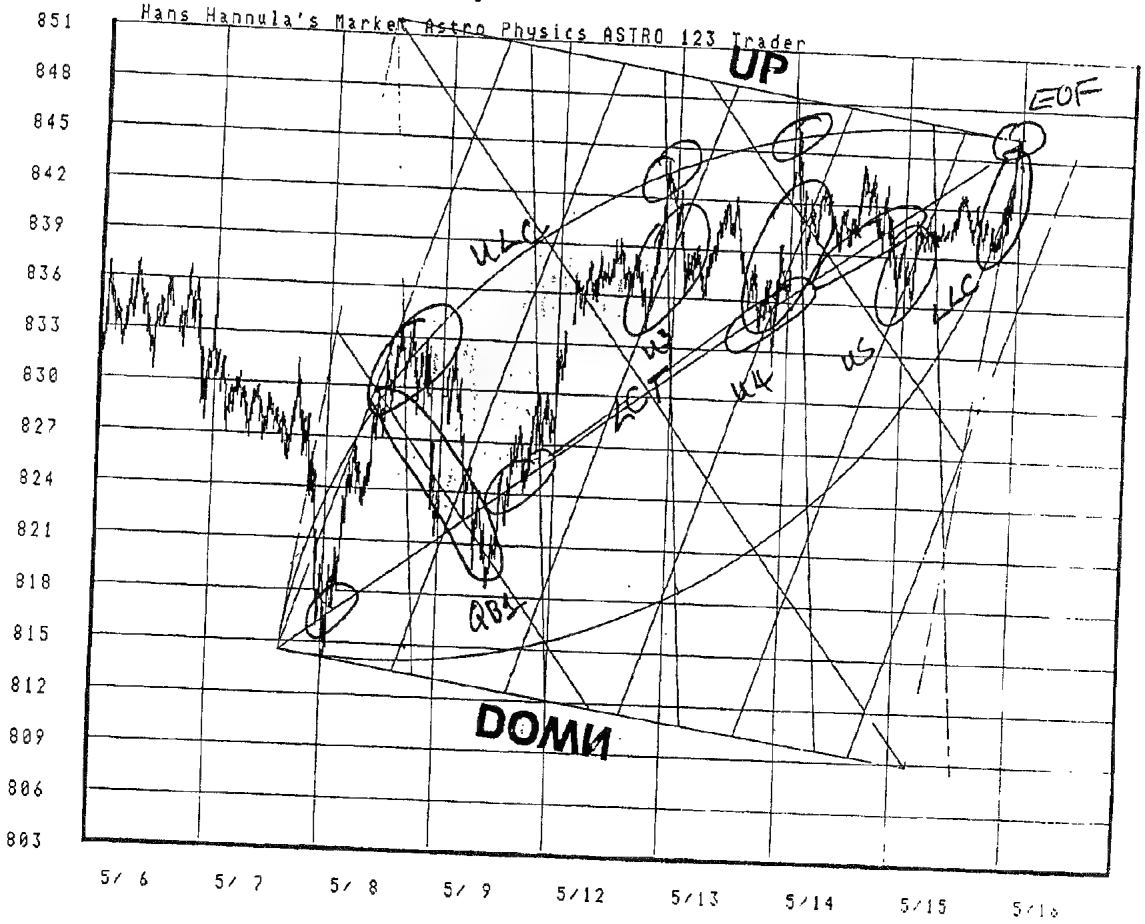


Figure 57.

Such tilting of the pattern is occasionally necessary to help you recognize the end of fractal. This tilt may be required because the energies adding together are shifting away from those originally forming the fractal or because the chart is not properly scaled for the fractal involved. Such tilting may also be necessary on charts that were scaled automatically by a computer program.

Figure 58 is one such auto-scaled chart. It was scaled automatically by the program I use to recap my S&P Hotline Day Trading forecast. The circled areas show how the ***Fractal of Pi*** pattern fit this chart. Of course the proper solution is to rescale the chart. More will be covered on scaling later.

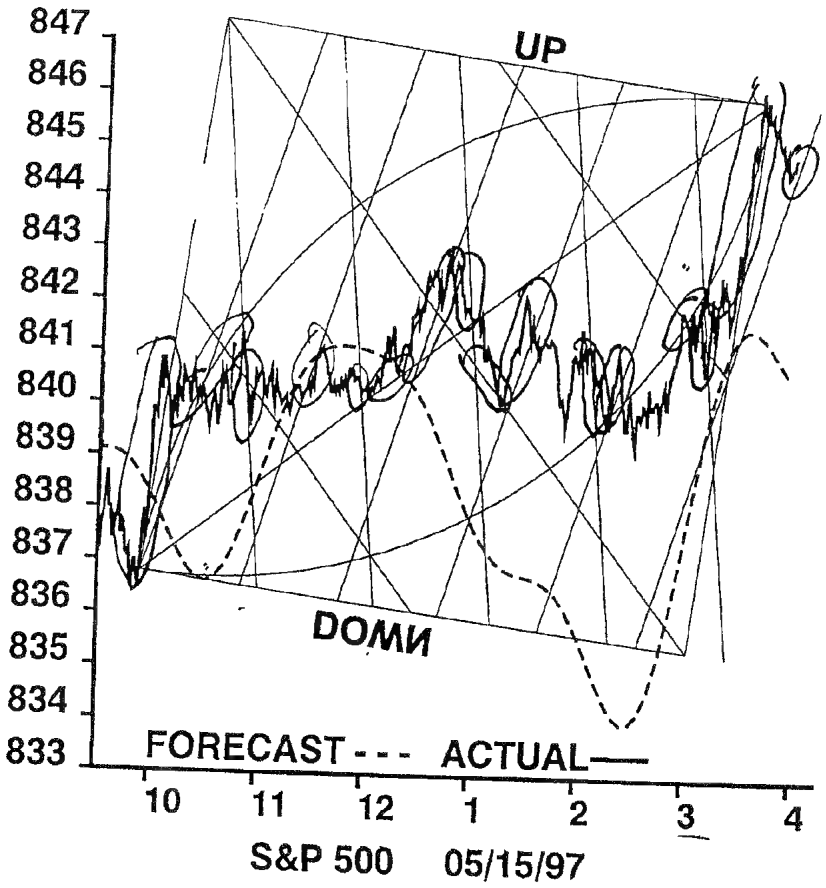


Figure 58.

Another behavior of the ***Fractal of Pi*** pattern is that of forming a mirror image. Recall how the ***Fractal of Pi*** pattern was generated with the streak starting on the left of the square and extending to the right. However, there are a set of harmonics which start on the right side of the square and move to the left.

Sometimes a ***Fractal of Pi*** pattern flipped from left to right and used upside down will reveal a better fit than the standard ***Fractal of Pi***. Figure 59 shows one such pattern.

This ***mirror image*** fit was actually recognized in real time during my day trading. The clue to use the mirror image was the location of the streaks with respect to the start of the

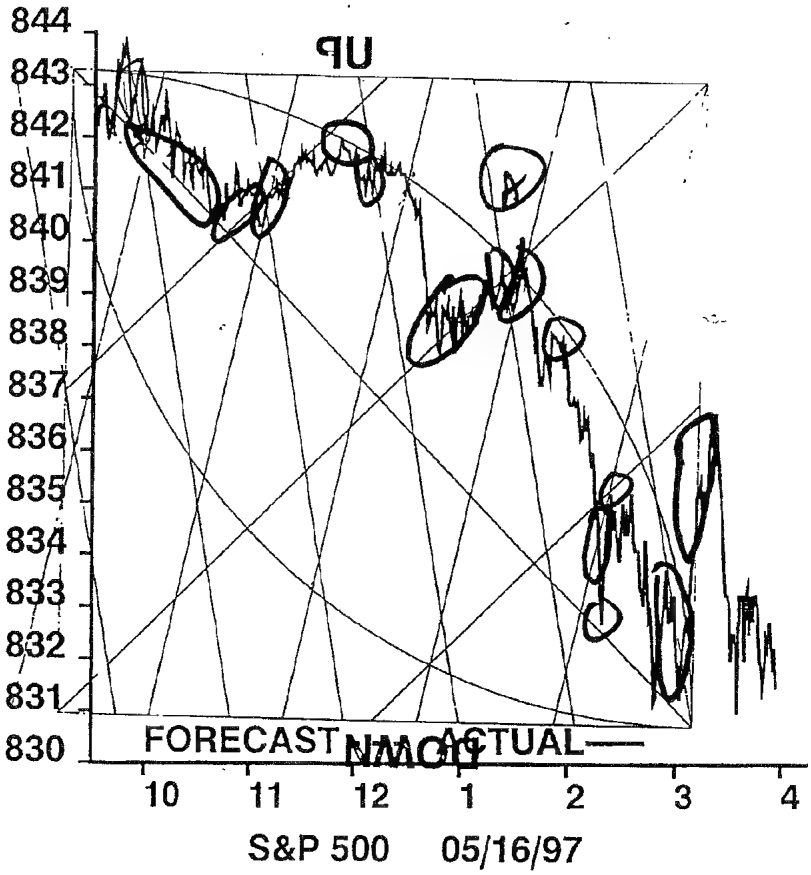


Figure 59.

fractal pattern. I have no hard or fast rule of when to look for mirror fractals, but if the normal ones do not seem to be fitting, check the mirror image.

Occasionally a chaotic market, such as the S&P 500, will completely break out of the square bounding a ***Fractal of Pi***. Knowing what to do in this case if important. Figure 60 shows a fractal pattern that started out well formed.

The fractal began with a decline along the LCT and a rally along QB1. Prices began to

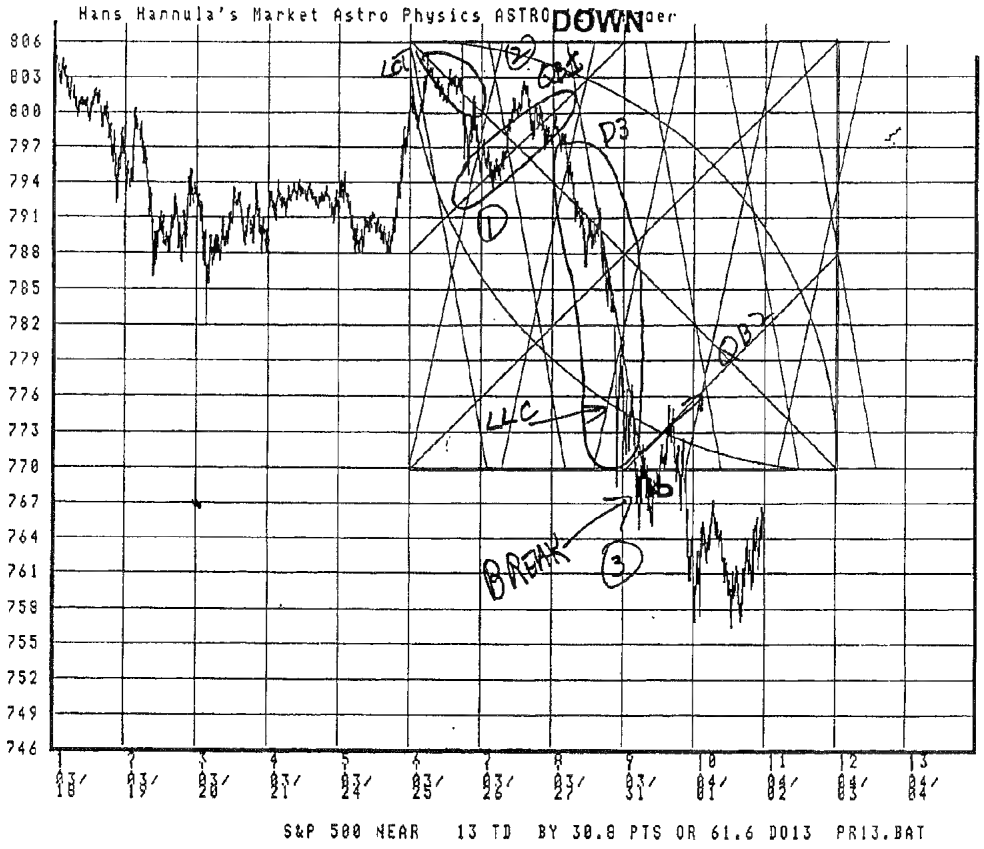


Figure 60.

drop sharply along D3 - so sharply that they broke below the lower limit cycle. They climbed temporarily back up into the fractal pattern along QB2, but then fell completely below the pattern. In this case one simple rule seems to be to slide the pattern vertically down.

This is shown in Figure 61. The pattern was shifted down until a fit was found with a little notch formed by D3 and U2. That seemed to bring the fractal into alignment with the price. We can see the effect of U3 and D4. Prices are bounded by the lower limit cycle of our downshifted fractal.

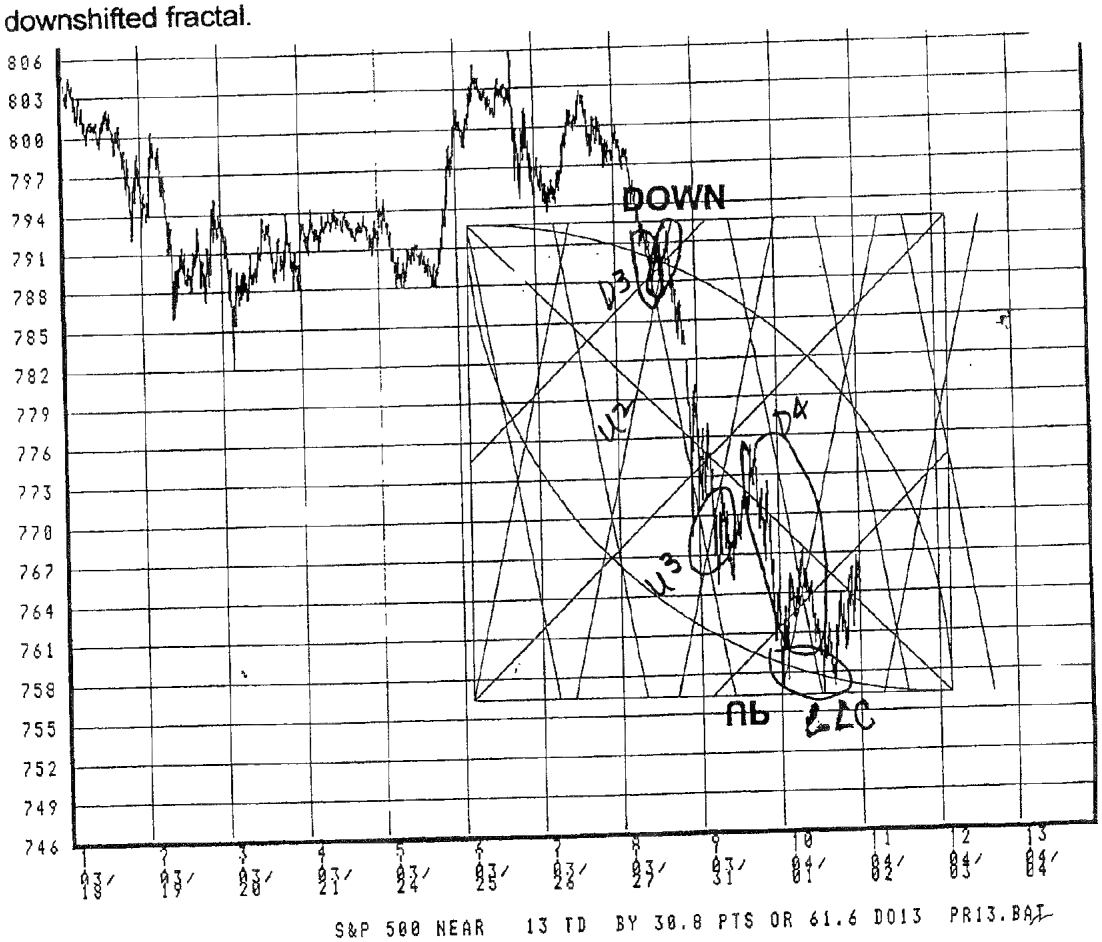


Figure 61.

Of course, another way to handle this situation would probably be to rescale the vertical axis of the chart. However, you may not have that option at the time. Or, if you have a chart fixed to a natural scaling that normally works well, you may not want to mess with the scaling.

system. I am simply trying to understand it with the best tools I can

Another type of shift which may occur in fractal patterns is a time shift to the right. Figure 62 shows an intraday fractal pattern in the S&P for May 6, 1997. That pattern was following the ***Fractal of Pi*** very nicely as marked by the areas that are circled and lettered. However, early in the day of May 7th, the market went flat and drifted sideways at point I.

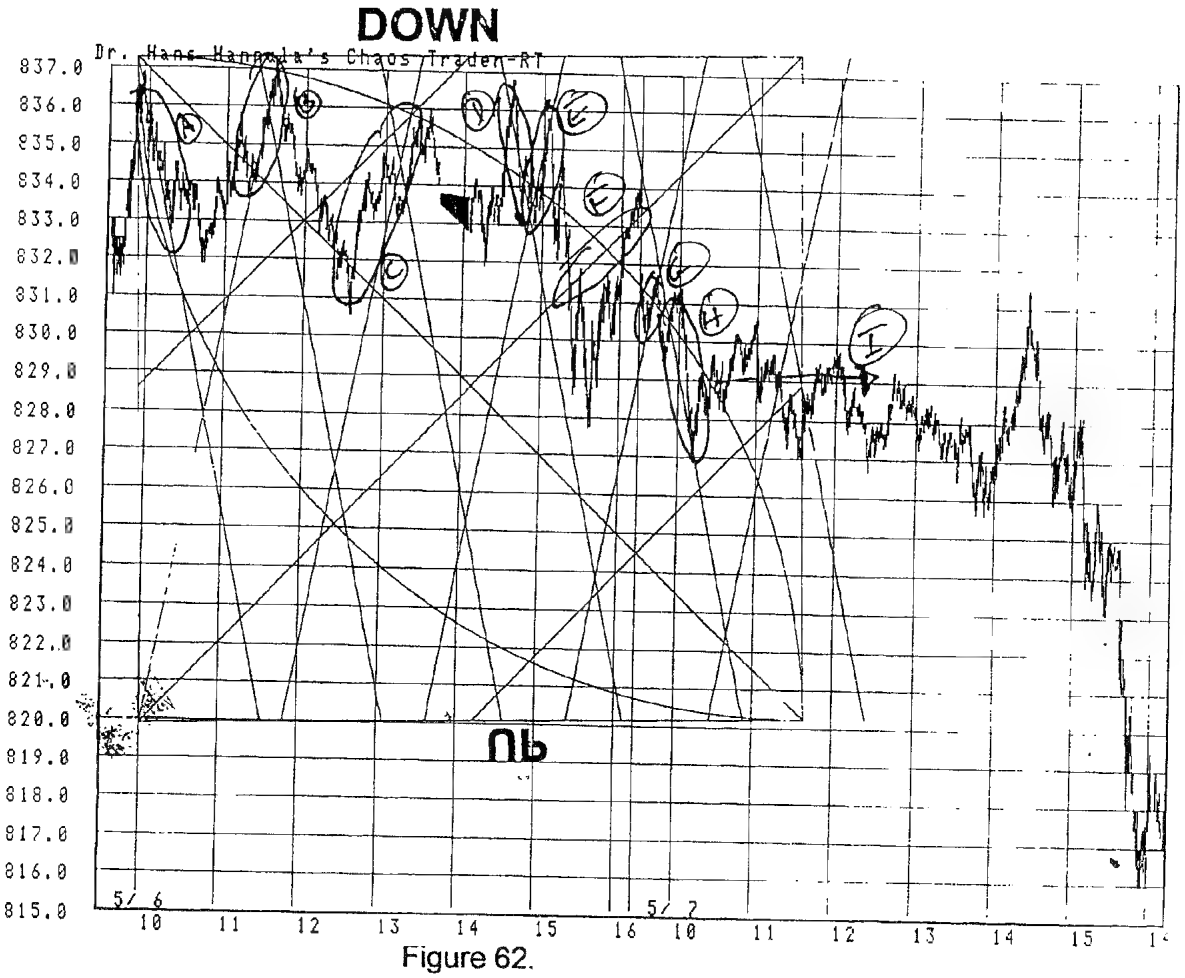


Figure 62.

Obviously this fractal had fractured, but the question was , "Where is the next fractal ,or how is this fractal resuming? "

The secret to answering, of course, is remembering that streaks are caused by harmonics within a square. After attempting various alignments to start the fractal on the peaks of May 6th and by adjusting my scale, I found another ***Fractal of Pi*** pattern which fit nicely. It rallied up U1 at B, down D2 at C, touched the quarter bar at D, and ran up U2 at E.

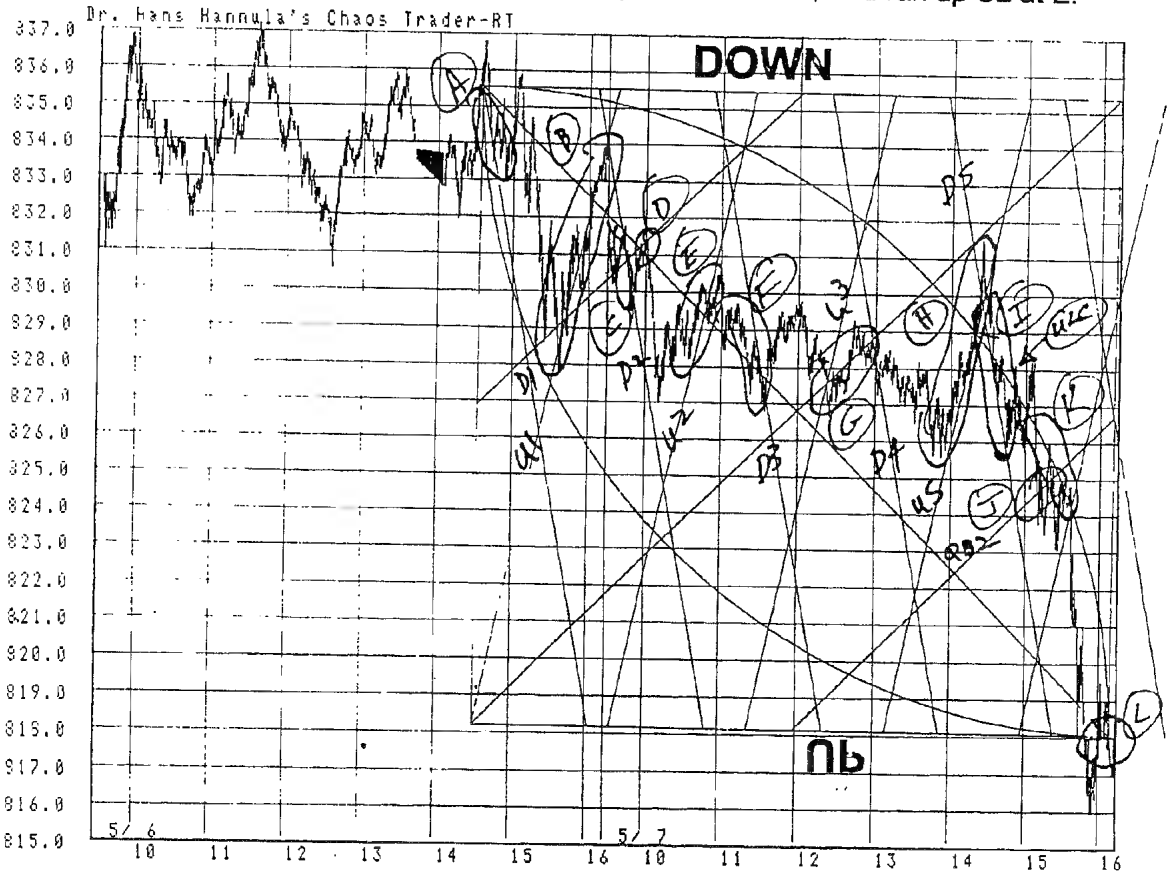


Figure 63.

From there it followed D3 down into the crossbar, where it followed U3 and D4. Late in the day the market rallied sharply along U5 shown at H. This looked like an upper limit cycle failure.

However, prices pulled back sharply along D5, under the upper limit cycle, and began to follow it as shown at K. They oscillated a bit at QB2, shown at J. They then dropped sharply to the end of fractal shown at L.

These examples illustrate some of the behaviors of the ***Fractal of Pi*** pattern. I wish I could tell you that the ***Fractal of Pi*** pattern was perfect, but Hey! I did not invent this system. I am simply trying to understand it with the best tools I can.

I have found that the ***Fractal of Pi*** pattern, even with its odd behaviors at times, is a very valuable trading tool. In the next chapter I will show you some of the trading techniques I have used with the ***Fractal of Pi*** pattern.

Trading The Fractal of Pi

My basic approach to trading the ***Fractal of Pi*** is to use the pattern to analyze what the markets are doing. As I analyze the pattern, I am looking for the opportunities to get in on a streak. When I think I am near such an opportunity, I place an entry stop. I put it in such a position that if it is hit it practically assures the streak is in progress. It will elect me either long or short in the direction of the streak. I then use the pattern to help me determine where to place my protective stop. It is placed at a point that would probably mean the streak was not happening.

I also use the pattern to find a point at which I want to cash in on the trade. Streaks do not last forever, and one of the biggest illusions amongst traders is that they have caught the crash or rally of the century.

The best way to illustrate trading techniques is by example.

This chart shows the December S&P 500 for 11/21/1996. Examine the low near 10:30 Eastern. The action near this low is show in the cutout enlargement.

The ***Fractal of Pi*** explains very clearly why markets sometimes break through resistance, and sometimes have "false breakouts". These false breakouts can trap traders into

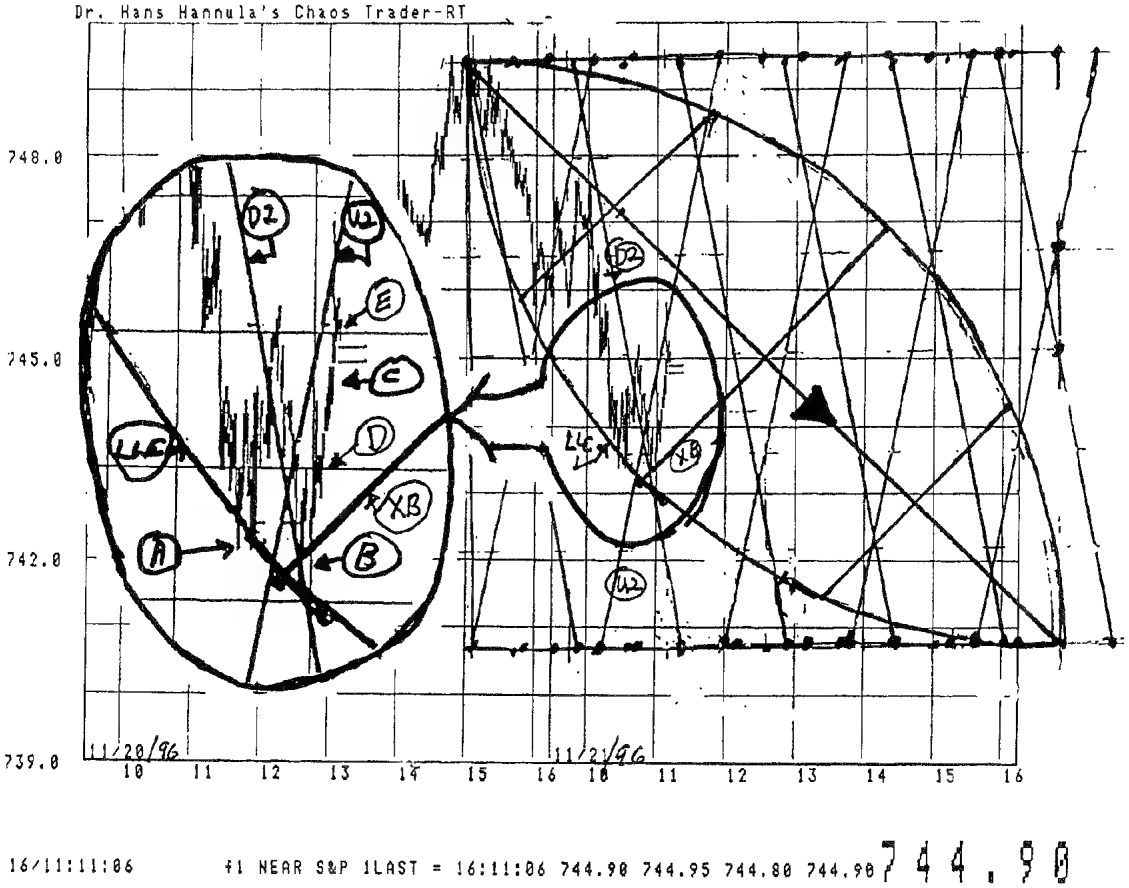


Figure 64.

losses, so it is very helpful to be able to anticipate them.

It is all a matter of where in the development of a fractal the market is. Coming into the low near 10:30, the market was falling fast, along streak line D2. It even fell below it. It met support at the lower limit cycle LLC. The bounce off of LLC brought prices directly onto D2, again sending prices lower. They made marginal new lows, hit LLC and XB, the fractal crossbar. Prices then shot up streak line D2.

Any trader who had placed a stop under the first low A, was elected short at B, and had an $800 per contract loss at C. On the other hand, the trader who anticipated this reversal could have place a buy stop at D, and cashed it in at E for a quick $500 gain.

This chart shows the December S&P500 for 11/21/1996, at 2:36 PM Eastern. Prices had rallied to point A, so I got interested in making a trade.

The market had moved up sharply just after 2 PM (labeled 14 on the chart, in 24 hour time). That fast rally had been stopped by the crossbar, XB, and the upper limit cycle,

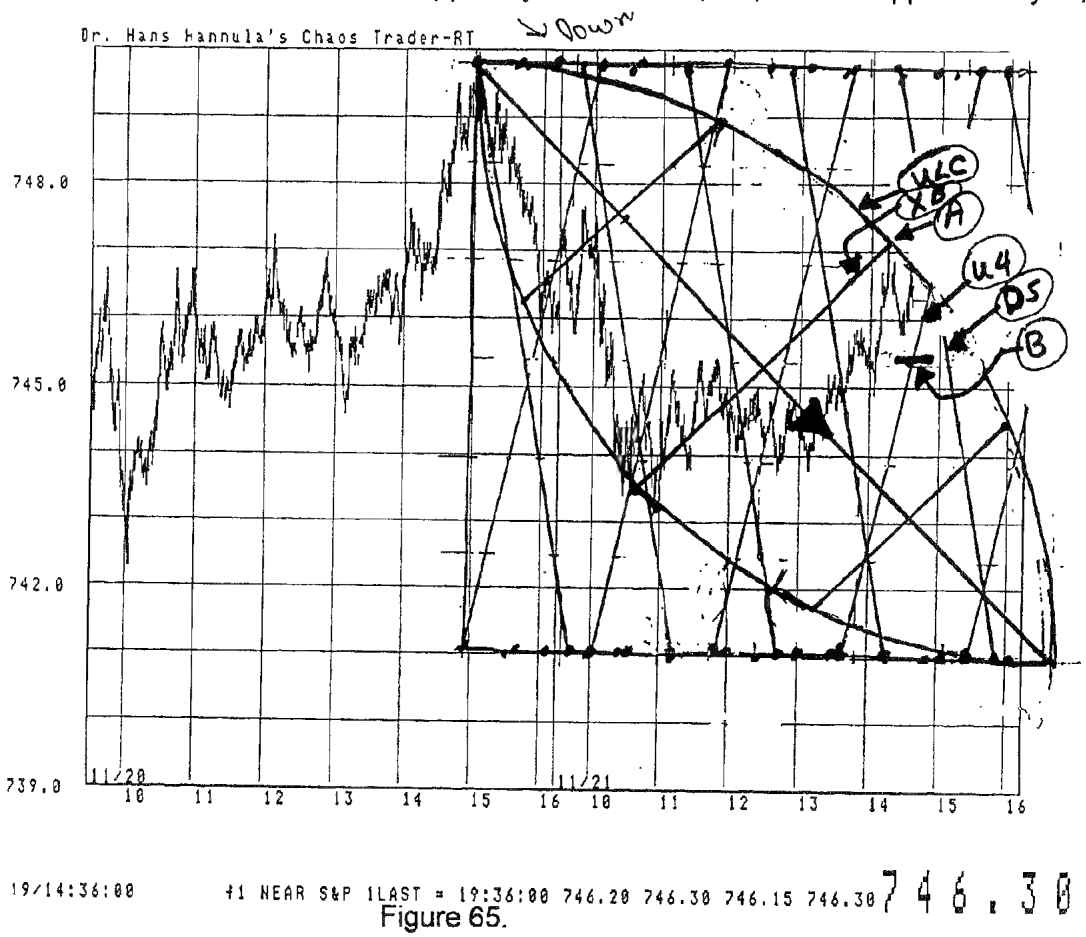


Figure 65.

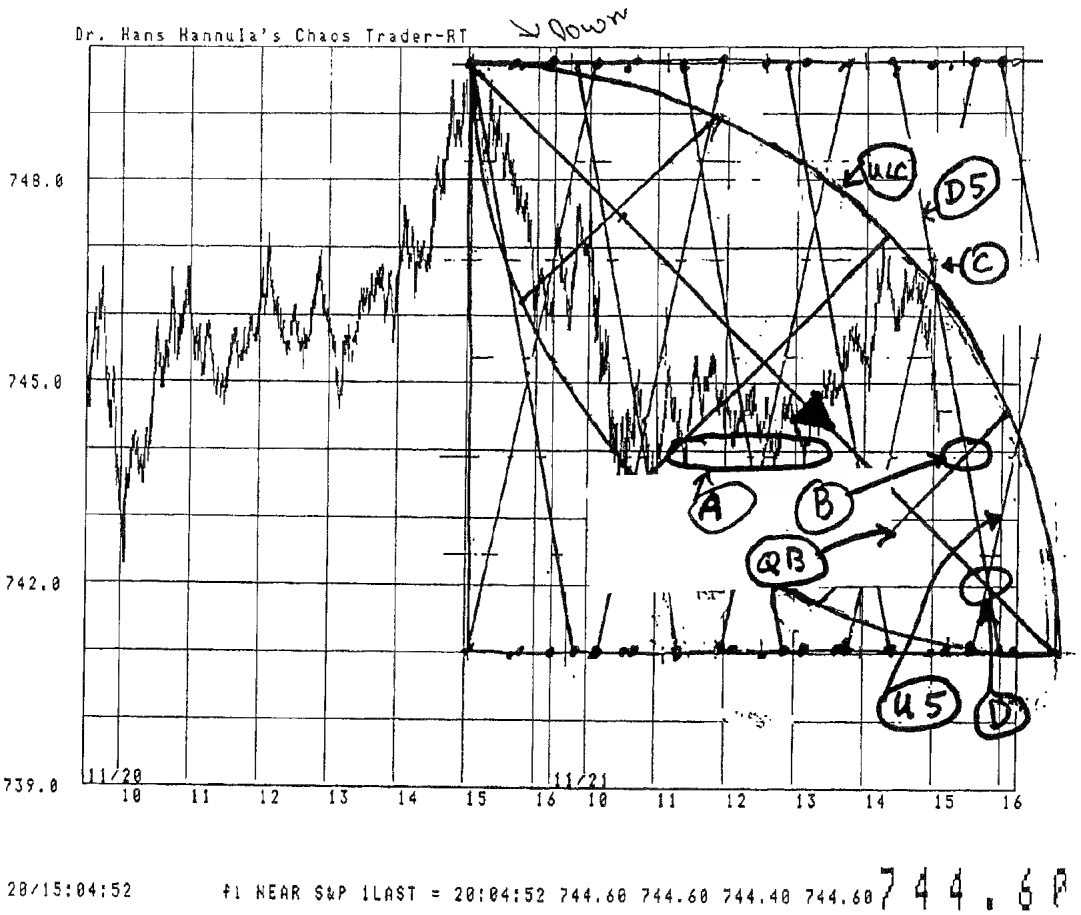
ULC. They were rallying a bit near up streak U4, looking like they could shoot up it and break out of the fractal. If they did that, they would be very unlikely to fall back below the ULC. Since the market had been making new record highs for weeks, such a rally could be expected.

But if the fractal held, prices were highly likely to drop sharply along streak line D5. If they did that, the fractal pattern provided good information with which to manage the trade. I thought the fractal would hold, because my 36 minute Polarized Fractal Efficiency was topping and turning down.

At this point, I let the market enter me. I let it prove me right. I am a devout coward about jumping into anything. Comes from not liking cold swimming pools. So I just placed a SELL at 745.50 STOP order.

My entry stop was hit just before 3 PM Eastern (15:00). As soon as it was hit I called in a protective stop. I placed it at 745.60. As shown at C, that price is just above the upper limit cycle, ULC.

Prices were dropping nicely along down streak D5. This move was obviously move 5



down in the fractal. So rather than deceive myself (AGAIN) into believing that I had just sold at the start of the CRASH OF THE MILLENNIUM, I decided to look for a point to CASH IN ON CHAOS.

The quarter bar, QB, intersects the down streak D5, at point B, at 744.00 . Looking to the earlier action, this was a support area, as shown at A. Prices could stop there. But maybe prices would drop to 742 . I could collect my money there.

But, even if prices dropped to 742, the up streak U5 could bring them right back to 744. So ***I decided not to care*** if the streak ran to 742 or even 741 or even 0. I placed a BUY 744.00 MARKET IF TOUCHED order.

Here's what happened. My MIT order was hit. When prices hit 744.00 my order became a BUY AT MARKET order. I got filled at 744.20.

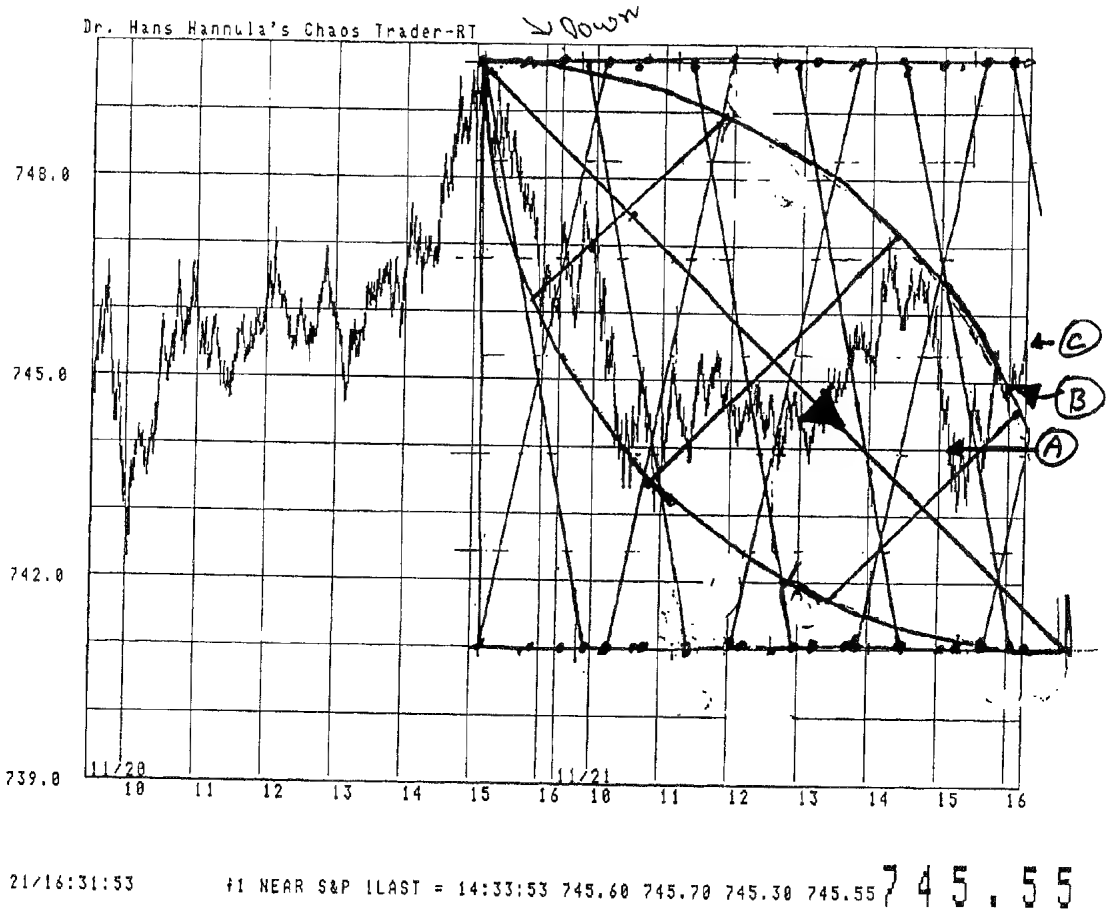


Figure 67.

Yes, I could have used a BUY 744.00 OR BETTER order. Next time I might. But I will be happy with my $650 profit. It was only about 30 minutes work. It was a miracle. I thank God for all miracles.

That fill looks even better when you see what the market did going into the close. It rallied sharply, breaking out of the fractal at B. It closed 745.55, taking back all my gain, plus a tick.

This was a well done ***Fractal of Pi*** trade. The fractal showed me where a Move 5 streak might be. I caught a good part of it. I minimized my risk. I CASHED IN ON CHAOS. I don't do all trades this well, but when I am focused and use the FRACTAL OF PI, good things do happen. With practice, you can do this, too.

Since the Intraday ***Fractal of Pi*** was broken as the market of 11/21/96 closed, one has to wonder what caused that break. Remember that fractals come in layers. And the layers are harmonic ratios of each other. Research has found that the next layer of fractals up from the 1 S&P point per hour Intraday fractal is a 3 S&P point per trading day fractal.

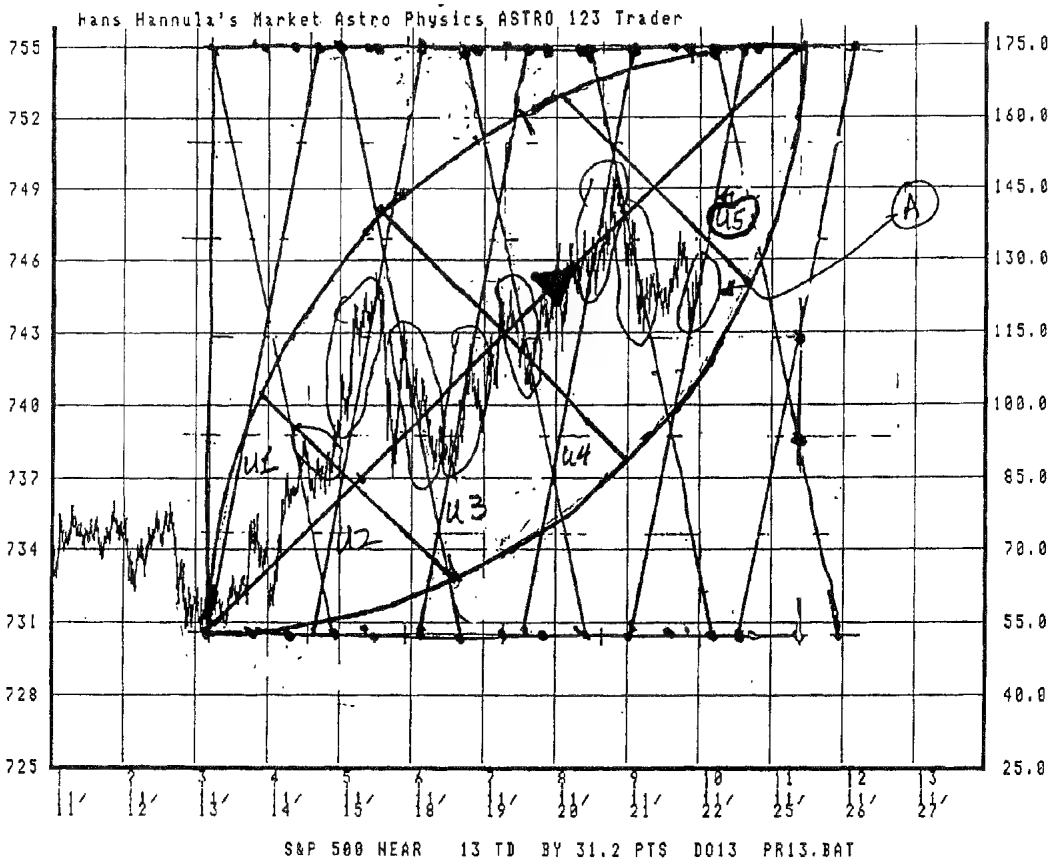


Figure 68.

Figure 68 is drawn to that scale. I call this layer the WEEKLY layer; and the intraday the DAILY layer.

Notice the ***Fractal of Pi*** on this layer. Areas of alignment are circled. Note how at A, the up streak U5 of this larger fractal is what broke the intraday fractal. So it truly was a miracle that I chose to CASH IN at 744.00 where I did. While I was focused on the daily fractal, the weekly fractal was getting set to stomp on it. It's all elephants, ants, and gnats. Remember, as a S&P day trader, you aren't even an ant. You are a GNAT. The daily fractal, the ant, can STOMP on you. To you, it is an elephant. Don't get in its way. Protect yourself with stops.

Those stops also protect you from the ***Elephant of the Week.*** If you are lucky, use the ***Fractal of Pi*** well, and RELIGIOUSLY use stops, God may send you some miracles to help you not only get out of the jungle alive, but with some CHAOS CASH.

Figure 69 show the S&P as of the close Nov. 22, 1996. Late in the day the market rallied from a low shown at B. The curvature of the rally was about the same as the LLC of the ***Fractal of Pi.*** This is shown at A.

This suggested a change in trend on Monday, at the End of Fractal (EOF) shown at C.

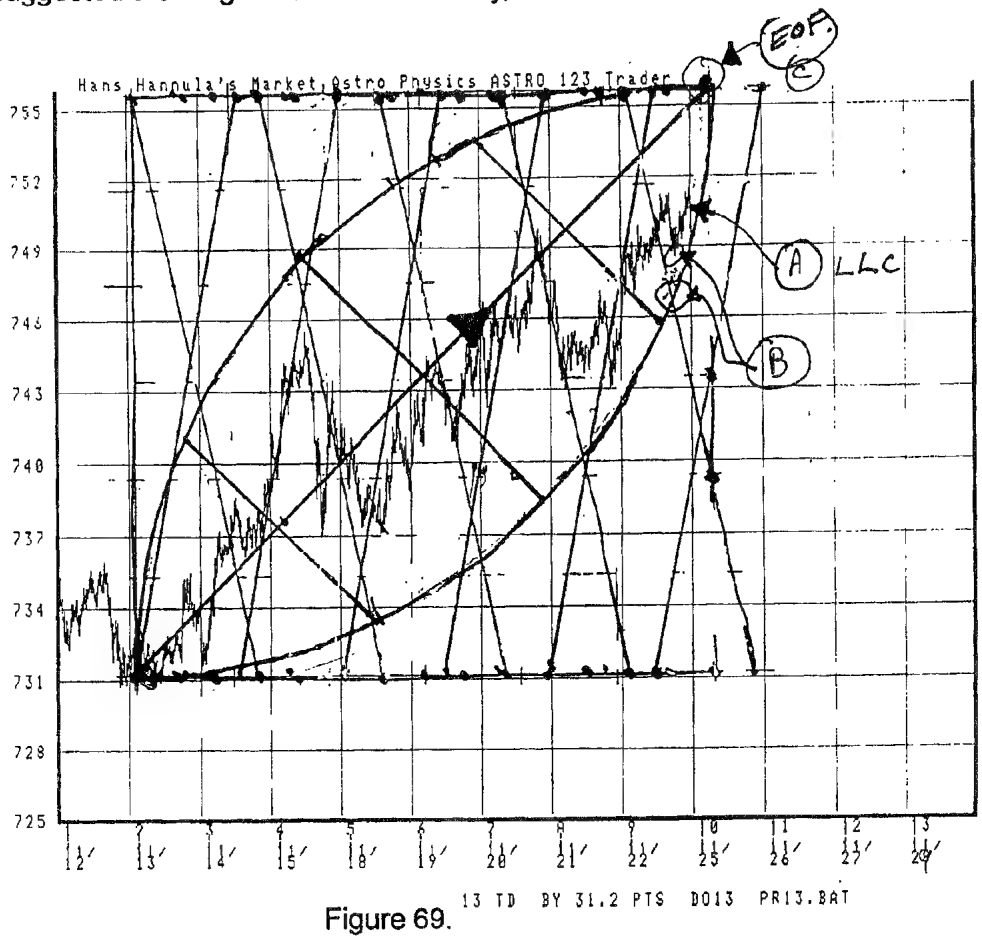


Figure 69.

Notice that the entire fractal pattern could have been moved up slightly on Friday to exactly align prices with the low at B. However, this would have made the overall alignment a bit worse.

The point here is that the Fractal was forecasting a Monday morning rally to about 755.50.

This chart shows what happened on Monday, Nov. 25, 1996.

Prices did rally right up the LLC at A, to 756.0. They then went flat. Normally, one would expect an up fractal to be followed by a down fractal. But a new down fractal would require that prices drop sharply.

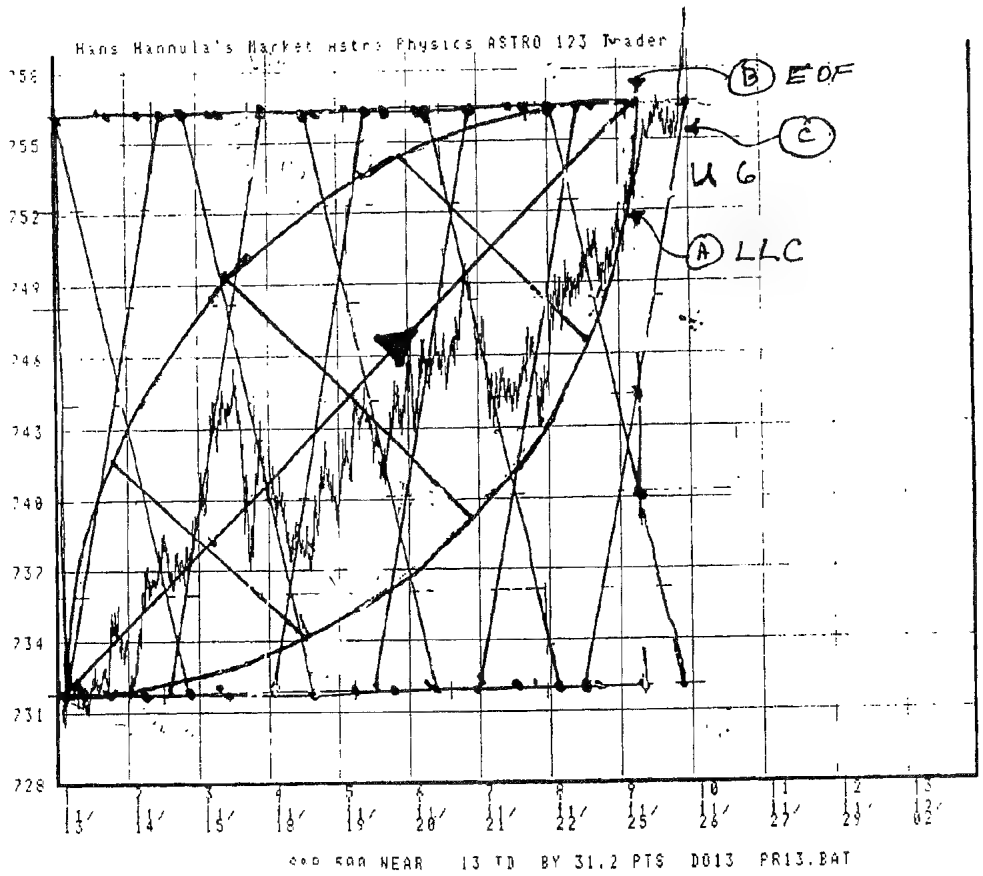


Figure 70.

They didn't do this. This caused me a bit of confusion. I still thought prices might drop, so I sold on stop under the congestion. I got elected short at 755.0. But I also placed a ***stop and reverse*** (SAR) to go long at 756.80. The reason for this was line C. It is the next up streak (U6) stemming from the ***Fractal of Pi*** already identified. If the Fractal expands to a larger scale fractal, or starts a new fractal going up rather that down, prices ***could*** streak along this line. Stops are placed to handle ***possibilities.***

Prices did rally sharply. In the last hour, prices jumped to over 760. I was reversed to long, and made up my loss. The lesson here is not to assume that the fractal you are watching is the whole story. It may appear over, then suddenly spring to life again. The U6 and D6 parts of the ***Fractal of Pi*** help you anticipate the need to REVERSE your position to catch a streak going the other way, if you have tried to trade an End Of Fractal.

Let us talk some more about stop placement. Figure 71 shows a mirror image ***Fractal of Pi*** in the S&P 500 from the 1st of April, 1997.

According to this analysis, prices had declined sharply down D4 and were showing congestion at the crossbar. Point A is the intersection of these two lines.

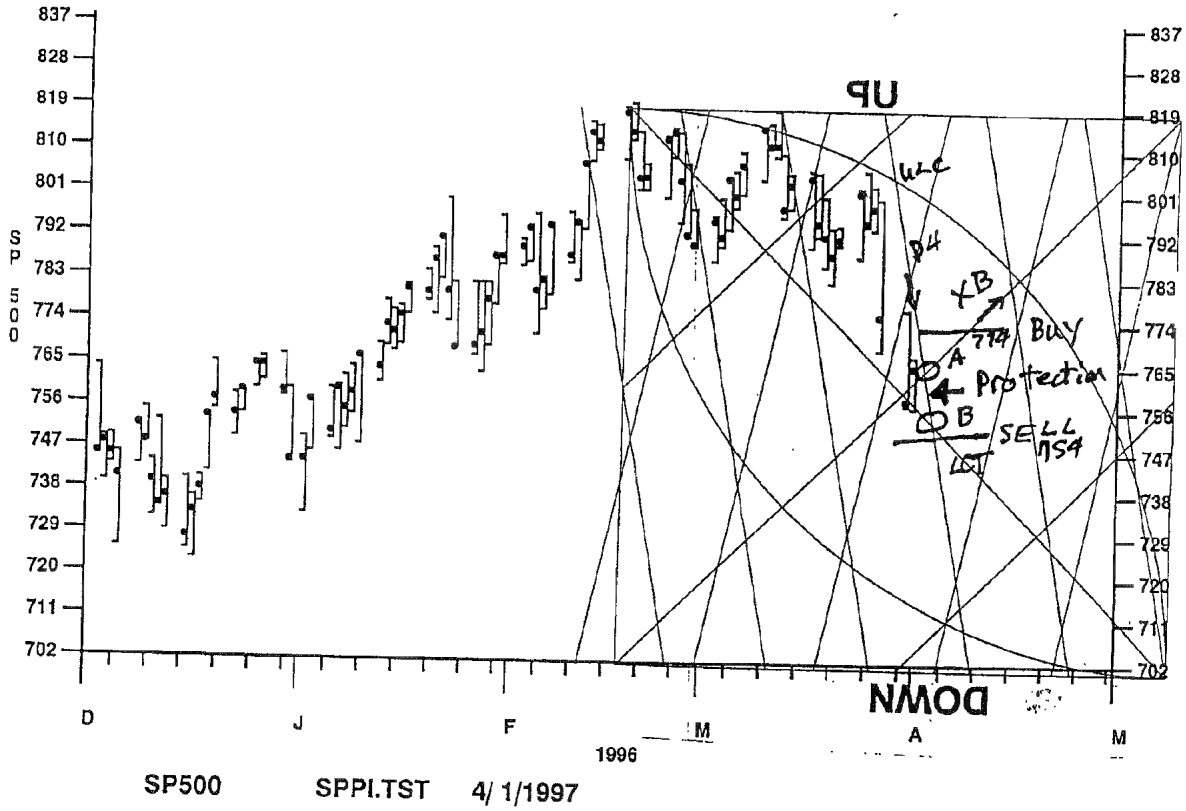


Figure 71.

At this point prices are either going to rally along the crossbar or continue to drop along D4. However, they may find support at the line of central tendency where it intersects with D4. That point is circled and labeled B.

So points A and B, then, are points of ***choice***. In chaos theory, these are ***bifurcations.*** The energies must pass above or below those points before the next significant move develops. Without deciding which way the market will go, one places stops so that in either case we go in the direction of the move. A sell stop level is indicated below point B at 754. A buy stop above point A at 774 was reasonable.

Figure 72 shows what happened. Our sell stop was hit and prices continued down along D4. We immediately lowered our buy stop to just above the line of central tendency. On the second day of the trade we were stopped out for a small loss.

That loss was appropriate. It was appropriate because it was ***strictly controlled.*** A

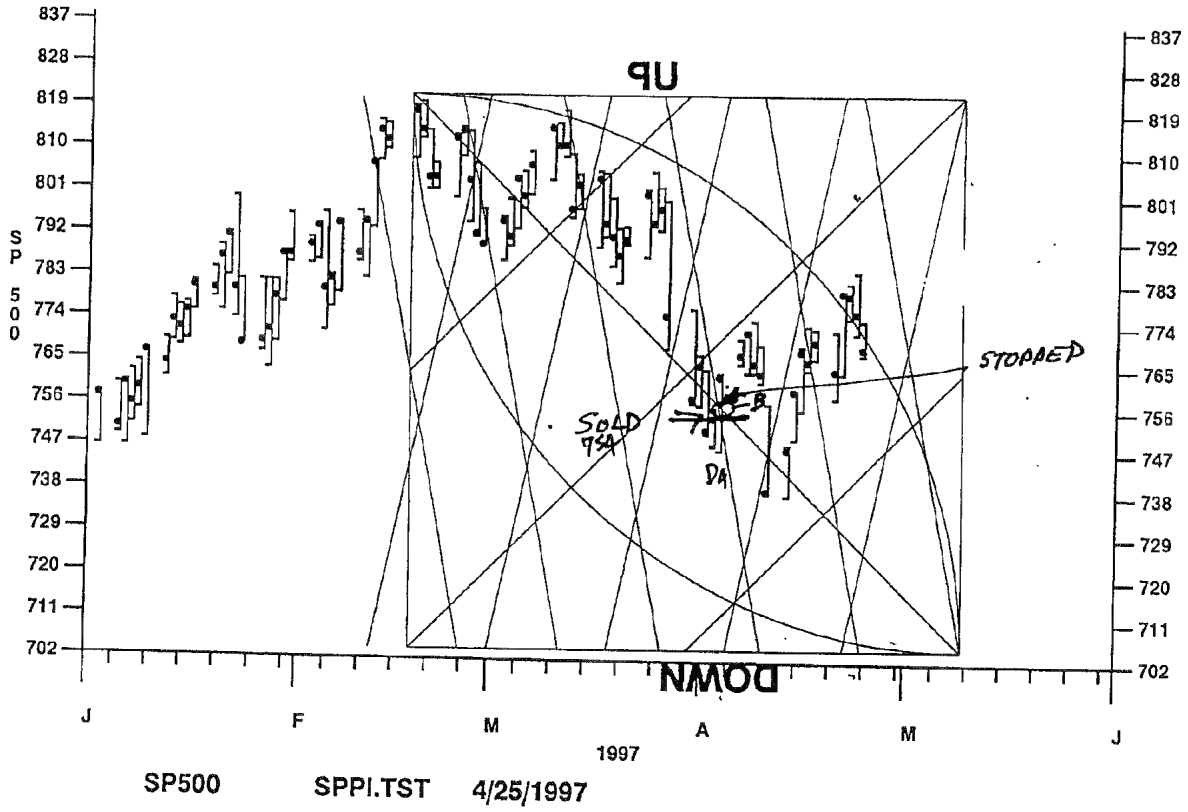


Figure 72.

position was taken on the evidence that prices were going to move down D4. That could have brought them to as low as 715, so the potential gain was big. However, any return above the line of central tendency at this critical point would have meant that the down move was ***fantasy***.

On the third day of the move, prices did start lower but they rebounded strongly to stop us out. This is an example of the use of stops to strictly limit losses. Always enter with stops, exit with stops, but move your stops intelligently. Always limit losses. Use the lines and intersections of the ***Fractal of Pi*** pattern to tell you where to put your stops.

Let's do another example. Figure 73 shows the S&P 500 March 25, 1997. The market seems to following a perfect ***Fractal of Pi*** pattern. However, it has arrived at the intersection of U4, D5, and ULC. This, again, is a point of a possible breakout from the fractal pattern or continuation along D5. Of course, a nice drop along D5 would be very

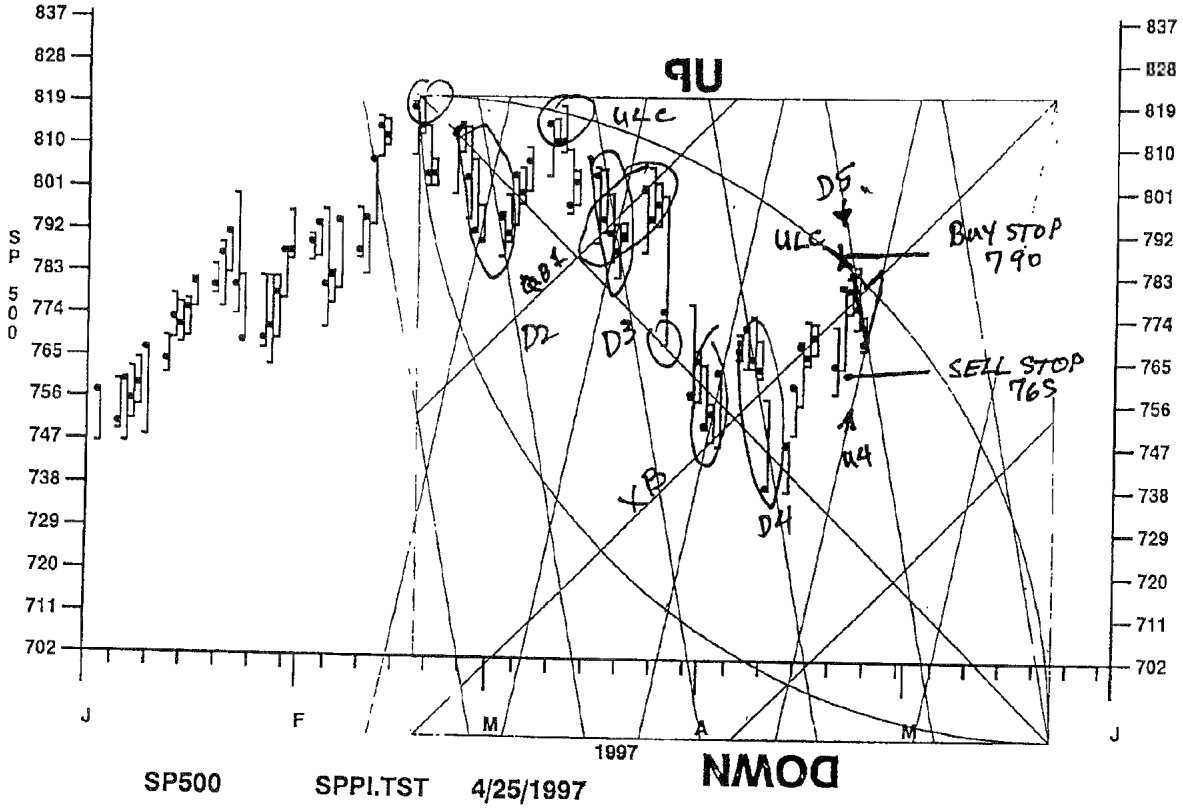


Figure 73.

lucrative.

Most traders are natural bears and that is the only possibility they will see. However, educated traders using the ***Fractal of Pi*** pattern will recognize that upstreak U4 could change this glorious bear scenario completely around in a matter of days.

This is especially true since this intersection is occurring over a weekend. Any new information, news event, natural disaster, etc. could happen. The obvious place to put the stops to catch either streak D5 or U4 is a buy stop at 790 and a sell stop at 765. If one is elected, the other becomes your protective stop. It can be moved as the streak develops.

Figure 74 shows what happened. The market exploded upwards along U4. This strong breakout to the upside indicated that the fractal had fractured. The close on the high of the day indicated a continuation of trend.

The smart thing to do was to immediately move a protective stop below the breakout day's

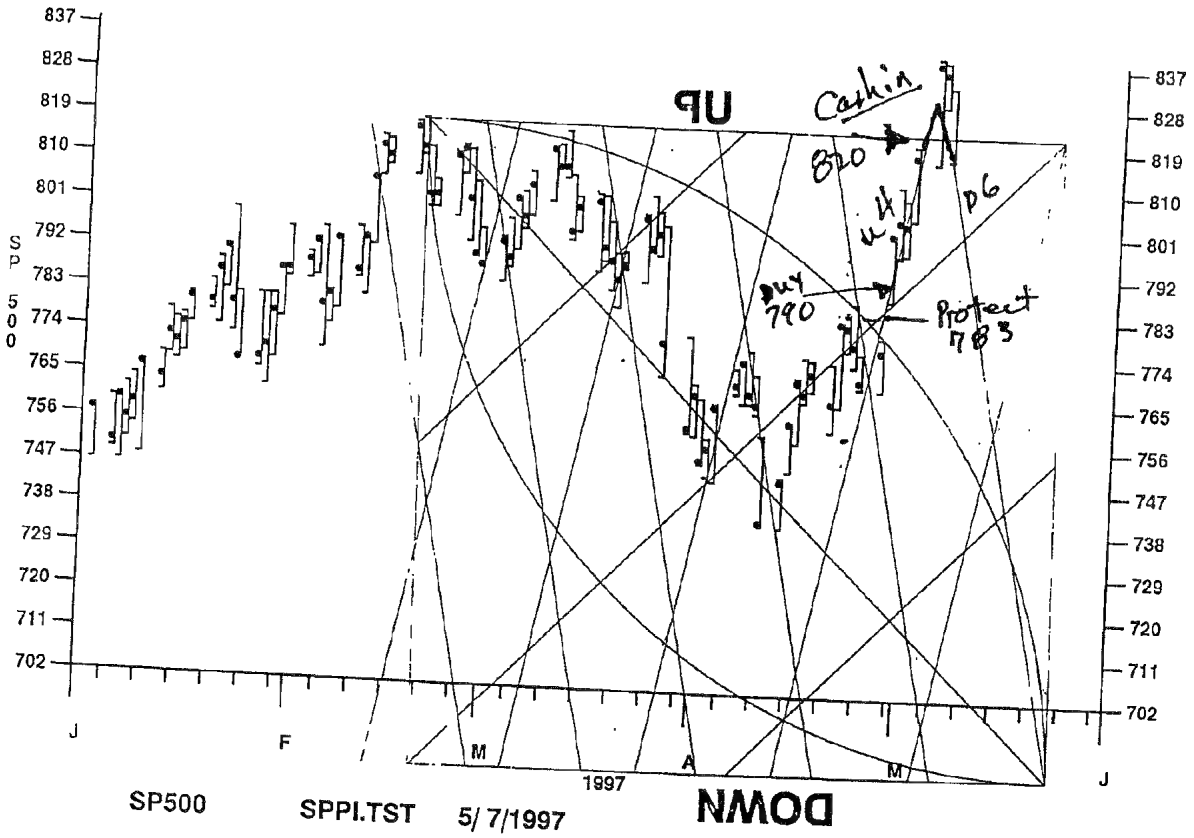


Figure 74.

low, in this case to 783. This protective stop can be moved up, setting it a few points below each day's low.

However, on a fast move such as a streak, one wants to be looking for a point to cash it in. In this case the top of the fractal square was a good possibility, especially since just above the square U4 and D6 intersected. So a reasonable cash in point in the case would have been 820.

Catching that streak would have netted a nice $15,000. Unfortunately, that is one of the fish that got away that I didn't see at the time. That will happen. Do not worry. There are more fractals coming. Endless numbers of fractals are coming.

Just work one streak at a time, one trade at a time, and follow these simple rules:

1. Always enter and exit with stops.
2. Always placd a protective stop whenever you have a position.
3. Trail your protective stop up to capture profits as a streak develops.
4. When a streak has run a good distance and is encountering a significant point in the ***Fractal of Pi*** pattern, cash it in.

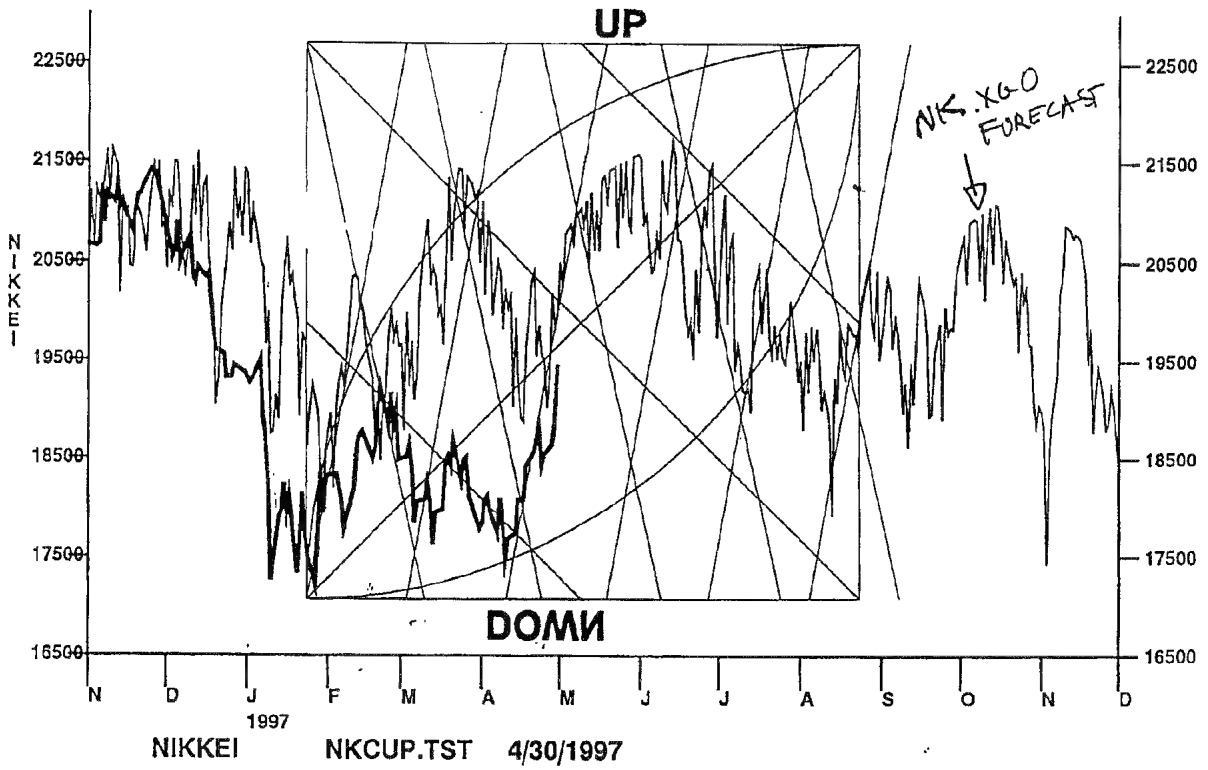


Figure 75.

This approach will result in you catching some streaks for big gains, never taking a big loss, and capturing some some gains and taking some small losses. Over time this approach will build equity as the market builds streak after streak. That is how you use the ***Fractal of Pi*** to ***Cash In On Chaos***.

I'll end this chapter with one other chart, Figure 75. This is the chart of the Japanese Nikkei index. This chart illustrates using the XGO forecast along with the ***Fractal of Pi***. The light line is the NK.XGO forecast. The heavy line is the Nikkie index. Notice how the forecast tends to fit the ***Fractal of Pi*** pattern. This is very interesting because the XGO forecasts are calculated with absolutely no knowledge of the ***Fractal of Pi*** pattern.

An XGO forecast is made using only one piece of information. That piece of information is the date of the first trade. That date of first trade determines the harmonics in the energy patterns that the market will follow. The XGO formula can compute the energy being received from the universe by any stock or commodity or person, at any point in time. This tool, then, gives a forecast of when those energy cycles will harmonize to produce streaks.

If one combines the ***Fractal of Pi*** pattern and the XGO forecast, one has yet another trading edge. In my position trading I use both of these tools to help me with trade selection and stop positioning.

No one tool is complete enough to trade all markets at all times. But all markets do work on the laws of energy addition. These laws, in turn, are based upon harmonics. The ***Fractal of Pi*** shows you where these energies harmonize together so strongly that they form streaks. With care and practice you can learn to recognize these patterns and trade them profitably. Yes, you can learn to ***Cash In On Chaos***. I know because I have done it.

Scaling Charts To Use The Fractal of Pi

Since the ***Fractal of Pi*** is a geometric pattern filled with squares and circles, it is obvious that charts must be well scaled. It is important that you understand what this means.

A fixed number of points must be represented in a fixed amount of time. For example, one point per calendar day is a good starting scale factor for any stock or commodity. A line that rises one point per calendar day would make a 45 degree line on the chart. This is a good type of chart to use for longer term position trading.

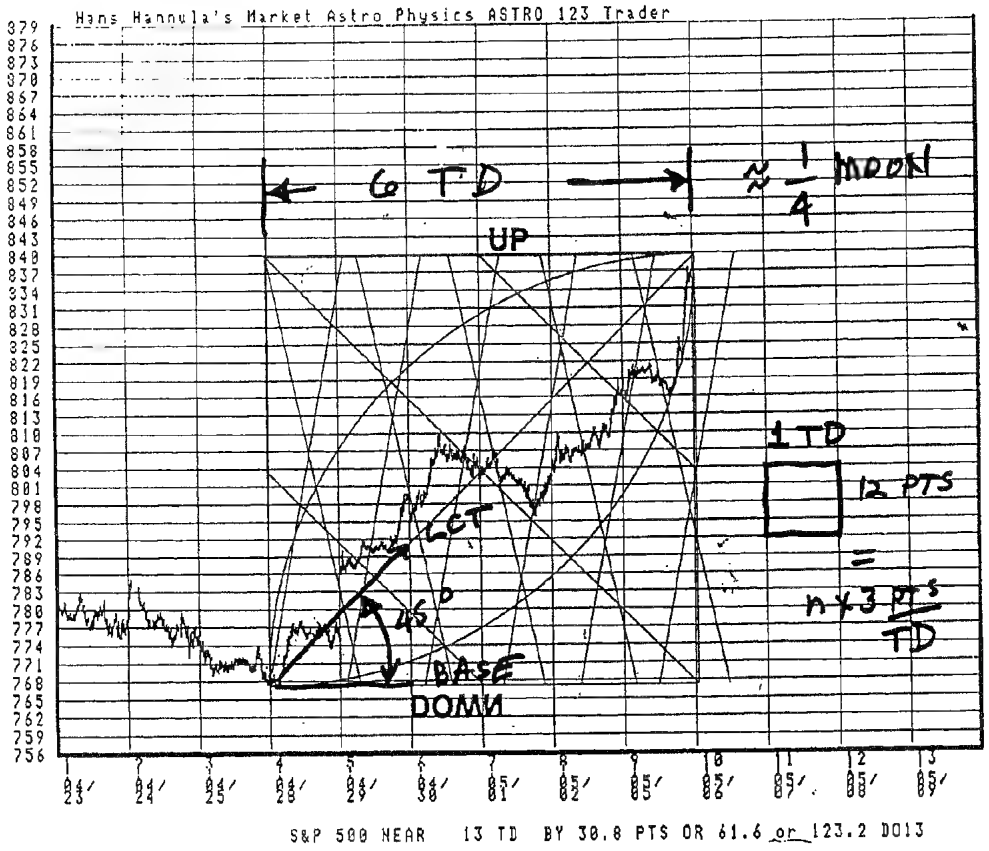


Figure 76.

On shorter time frames, different scale factors will be needed. What is important is that you find scale factors that represent natural cycles. These natural cycles can be expressed in calendar days, trading days, weeks, months, or hours.

Since I do much of my trading short term, I frequently use charts that are scaled to the cycles created by the moon. The moon makes a cycle of 29.7 days. One-fourth of that cycle shows up in markets as a cycle that lasts an average of six trading days. This is why six trading day fractals are so common.

Figure 76 shows a six trading day fractal on a chart that has been scaled so that the line of central tendency forms a 45 degree angle to the base. This required a vertical scale of

twelve points per trading day. I have found that in working with the S&P 500, that the moon causes an average motion of three points per trading day.

However, during volatile times, that may increase to some integer multiple of three points. An integer is a whole number, such as one, two, three, or four. In this case four times three gave my twelve points per trading day. That scale factor can be used in the S&P. It may be adjusted by an integer ratio in other markets.

The idea is to make one square of so many points in price equal to one time unit. By

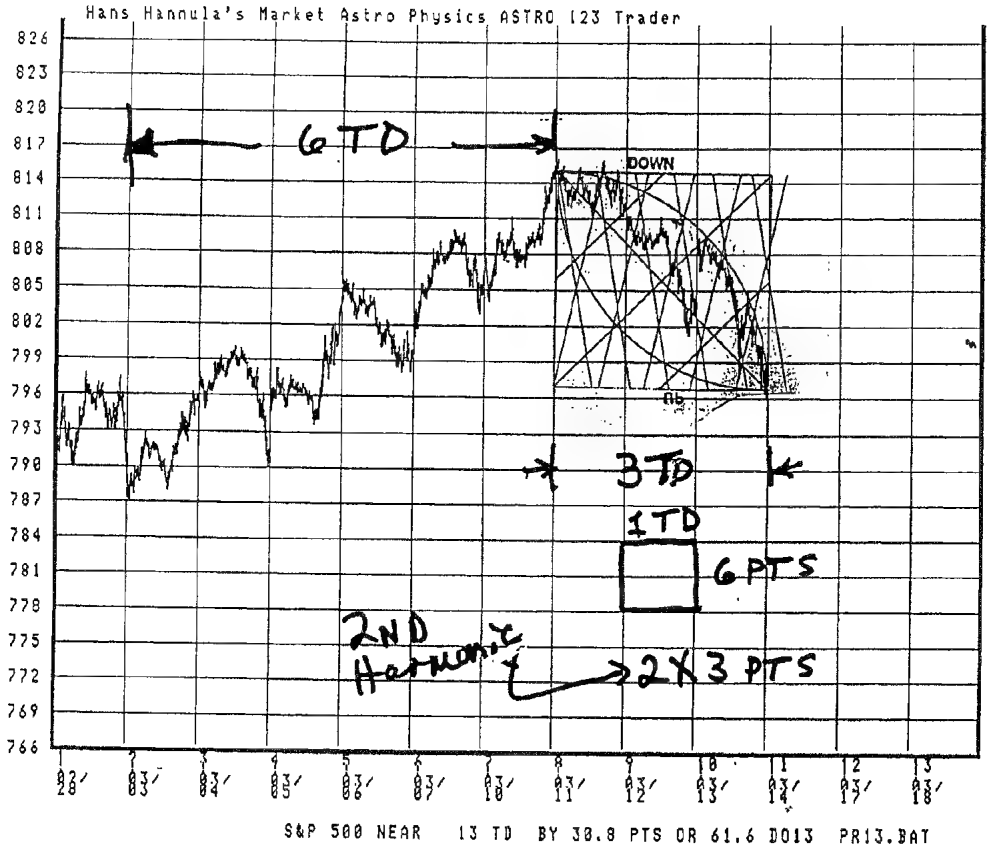


Figure 77.

setting the scale on a chart you actually tune the chart to the natural cycles. In Figure 76 we have the integer ratio of one-quarter moon forming the side of the square that goes horizontally, while prices are scaled harmonically to make the square a true square.

One check on a properly chart, of course, is that fractals do square and follow the lines and that the arcs are, indeed, circles and not ellipses.

Figure 77 shows a one-eighth moon, three trading day cycle. In this case the market was running on the second harmonic of the moon, which meant that it was moving six points per trading day.

It is necessary sometimes to adjust the harmonic used to fit the changing conditions of the markets. However, one should always set that harmonic ratio to an integer and use only integer scaling. Without doing so, you will not pick see the patterns clearly.

There is also a strong 90 day cycle in markets. This is caused by the beat between our seasonal cycle of 92 days and the Mercury cycle of 88 days. These average together to form a 90 calendar day cycle. Ninety calendar days divided by seven and multiplied by

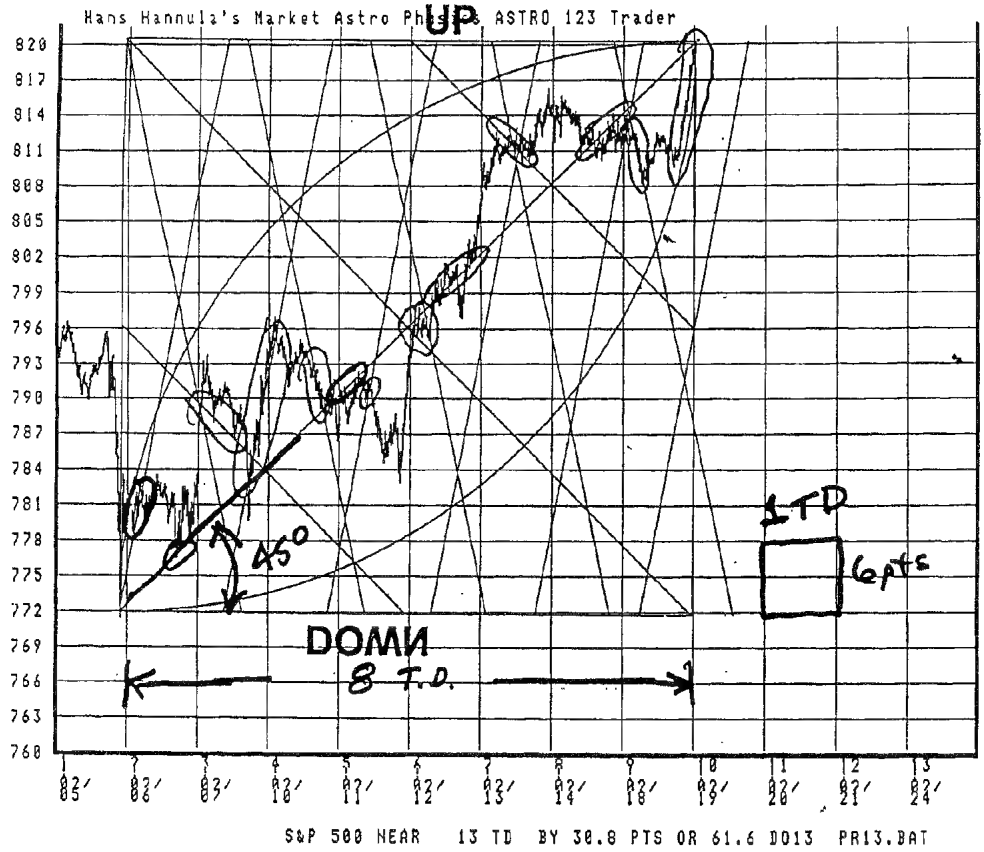


Figure 78.

five gives 64 trading days. Sixty-four trading days divided by eight gives eight trading days. This is another common fractal size in markets.

Figure 78 shows an eight trading day fractal, scaled to the second harmonic of the moon or six points per trading day.

Remember the example in the last chapter where prices broke through the bottom of the ***Fractal of Pi*** square? Figure 79 shows that pattern again.

That chart was scaled to the second harmonic of six points per trading day. The six day fractal was apparently stretching out into a seven day fractal. Notice how prices do not seem to be following the original line of central tendency.

The line of central tendency can be drawn from the start of the fractal as a straight line that tends to average its way through prices. The simple way to draw it in a down fractal is from

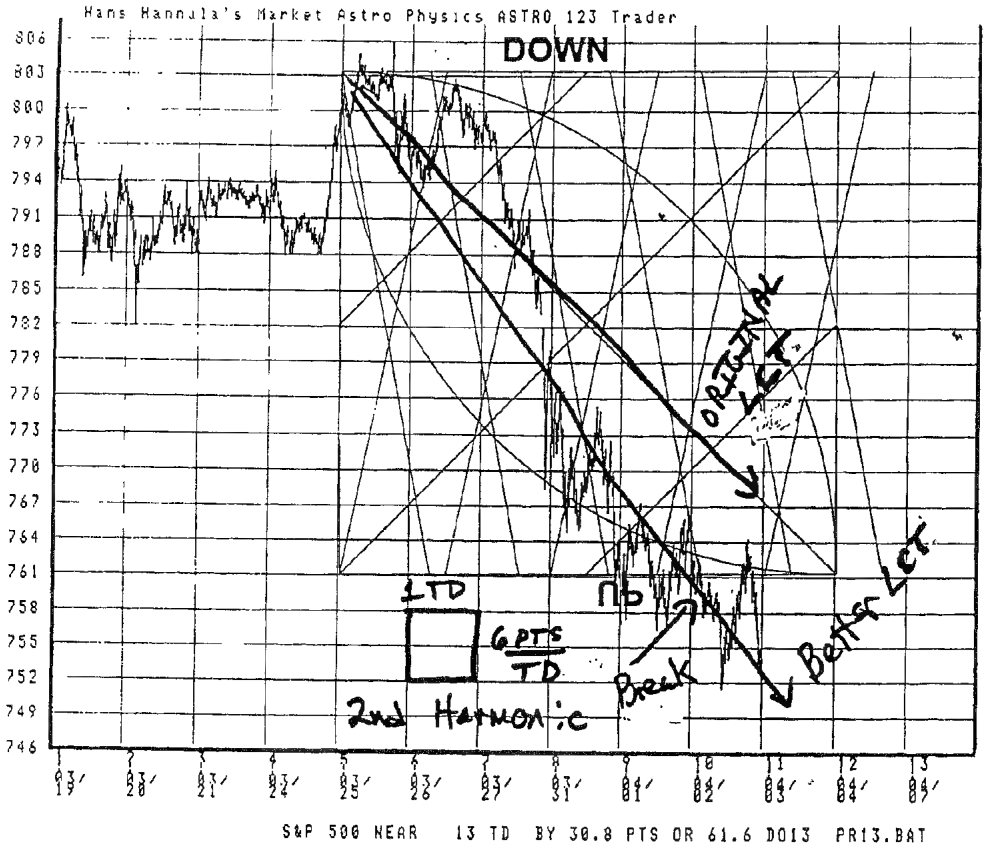


Figure 79.

the high to a point that is as far to the right as the fractal has progressed, and to the price level of the lowest low. That approximation to the line of central tendency is shown in this chart as a better LCT.

This LCT shift is a tip that the harmonics operating in this market have shifted. What one does in that situation is to rescale the chart harmonically.

Figure 80 shows the same chart scaled to the third harmonic of the moon which is nine points per trading day. Notice how nicely the fractal now fits. Such harmonic adjustments are occasionally necessary in markets. In a particular market they may occur, perhaps, once a month. So if things start not fitting, check your scaling.

Of course, not all traders use software with which they can control the scale. What is required is that you be able to set the number of points per time unit. You also want a stationary chart that does not scroll sideward automatically. It also needs a space to the right of the most recent prices to project the fractal forward. My own custom software does

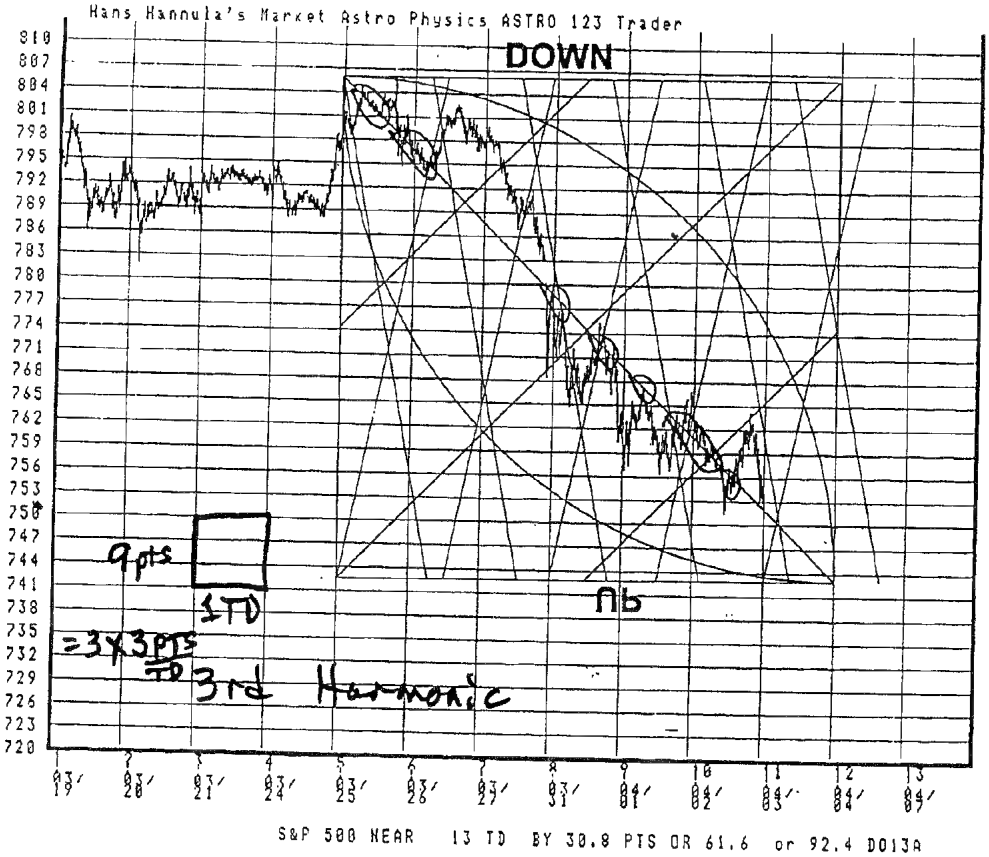


Figure 80.

these things. In my software, I have to set the high and the low for the chart and the starting time and ending time. So my scaling problem is simply a matter of me manipulating those parameters.

Much software scales automatically. This was designed to make charting simple and "user friendly." The problem with this sort of software, of which Trade Station is the most flagrant violator, is that it completely disguises the geometry of the markets.

Some software programs do have automatic scaling algorithms which create relatively well scaled charts. Two pieces of software that I know do this are the Ensign day trading software and the Nature's Pulse position trading software. Also, the Signal for Windows program does a reasonable job.

Figures 81 and 82 are taken from a chart in the newsletter published by Ernie Quigley of the ***Center for Study for Recurring Cycles***. This newsletter covers soybeans in depth.

When I looked at this chart, I recognized a tipped ***Fractal of Pi*** coming down as shown in Figure 81. The areas of agreement with the ***Fractal of Pi*** pattern are circled. Note that beans did break below the lower limit cycle but returned back inside the fractal to complete their pattern. This, I find, is somewhat typical behavior for grains.

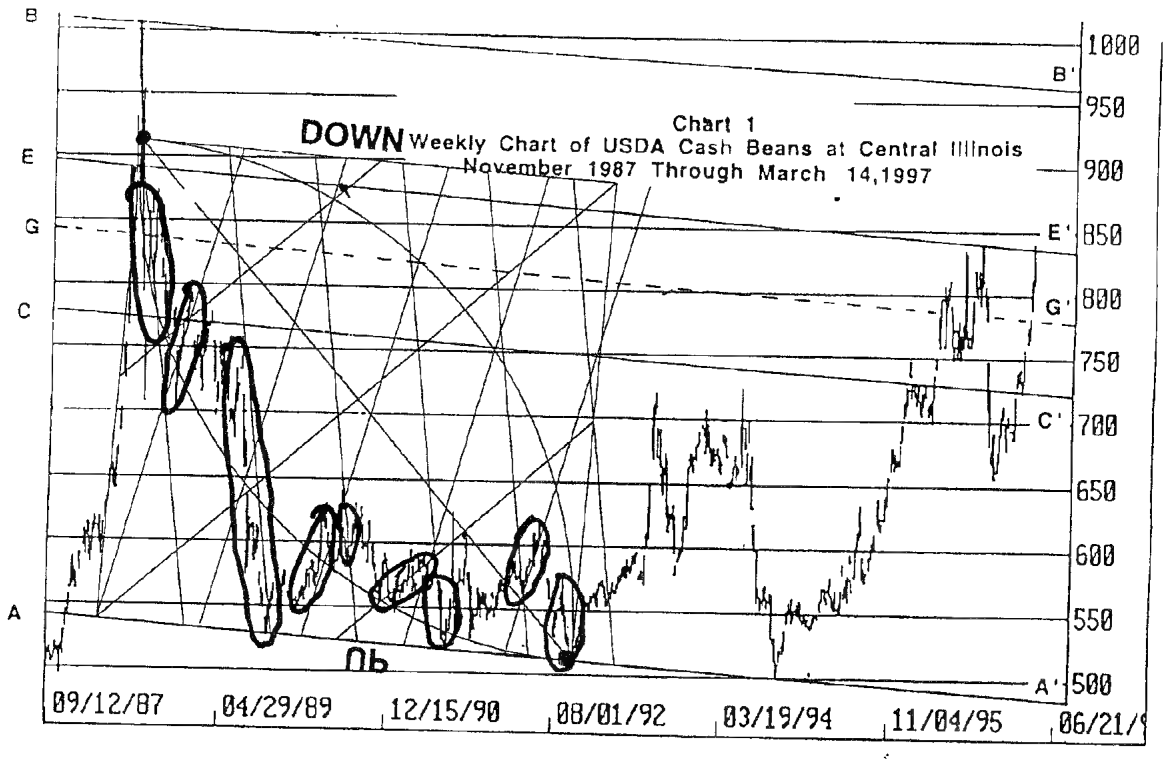


Figure 81.

Figure 82 shows the following up ***Fractal of Pi*** with the features of agreement circled. It was interesting to note that these fractals both had a tilt. When I inquired I learned that the lines to which they were tilted were parallel lines through the highs and lows.

So some commercial software will give you relatively well scaled charts, but it is sort of a hit and miss affair. You will have to experiment with the software you have. Also, many spreadsheet programs, such as Excel, can be used to produce well scaled charts. And if you need it, the software I sell can be used.

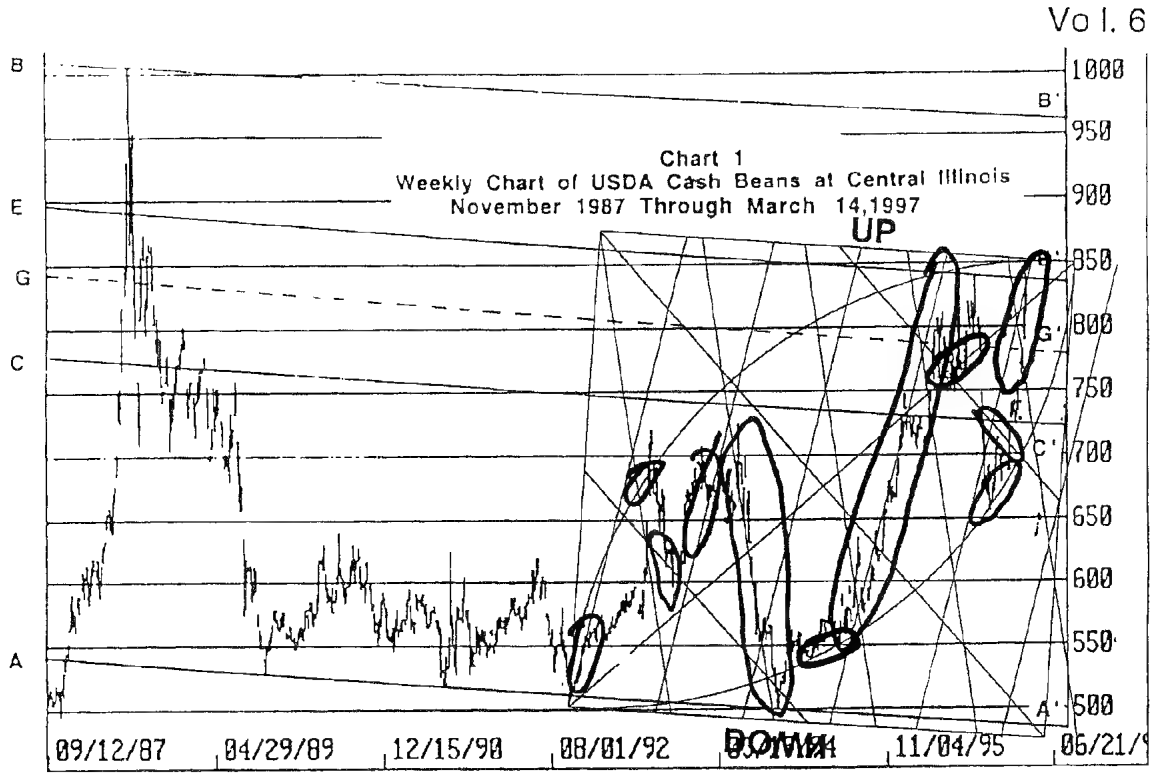
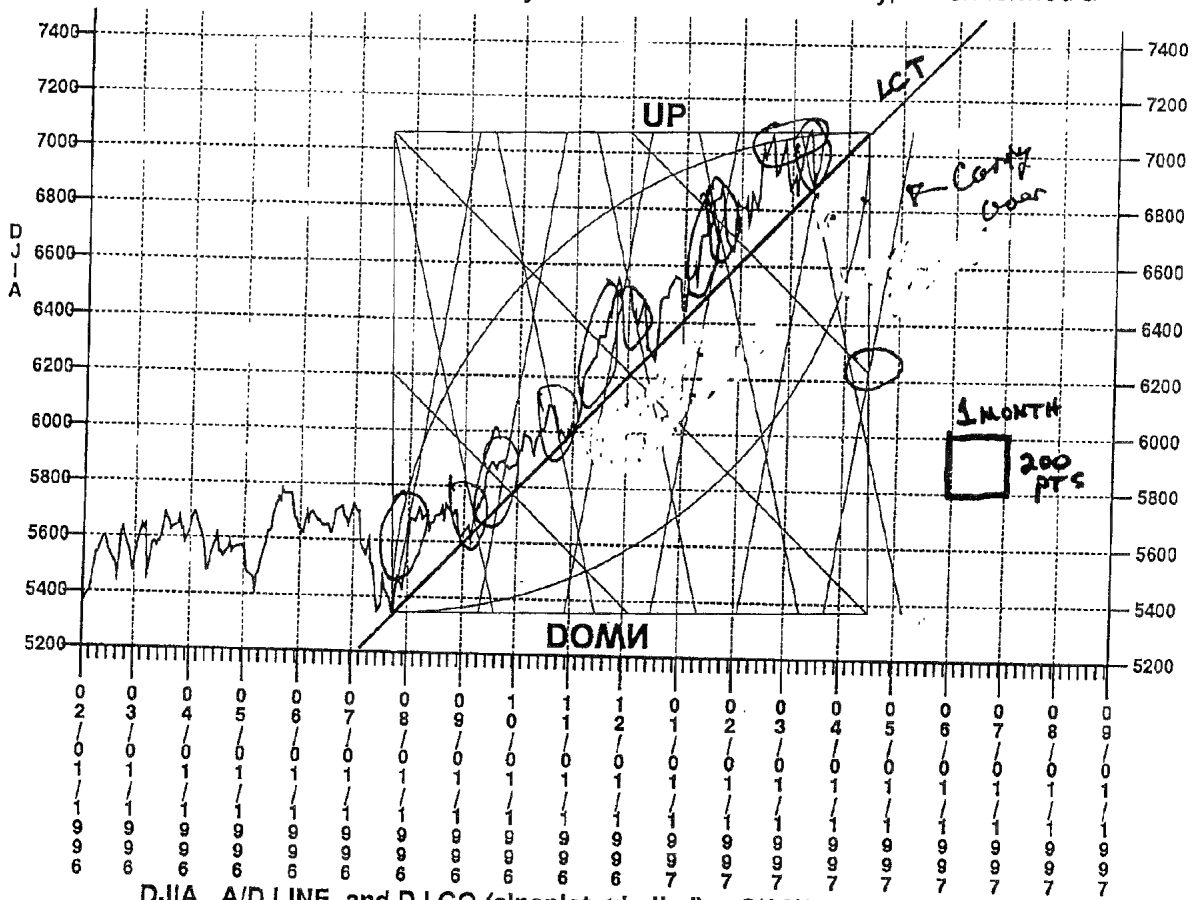


Figure 82.

Now let us talk about scaling and fractal expansion. Many times a trader will recognize a fractal pattern that is developing practically perfectly. One such fractal pattern is shown in Figure 83.

This shows the Dow in 1996 and 1997. The chart has been scaled so that one month equals 200 points. It has been found that this is a good scale factor for the Dow.

How good of a scale factor is illustrated by the line of central tendency, which formed a



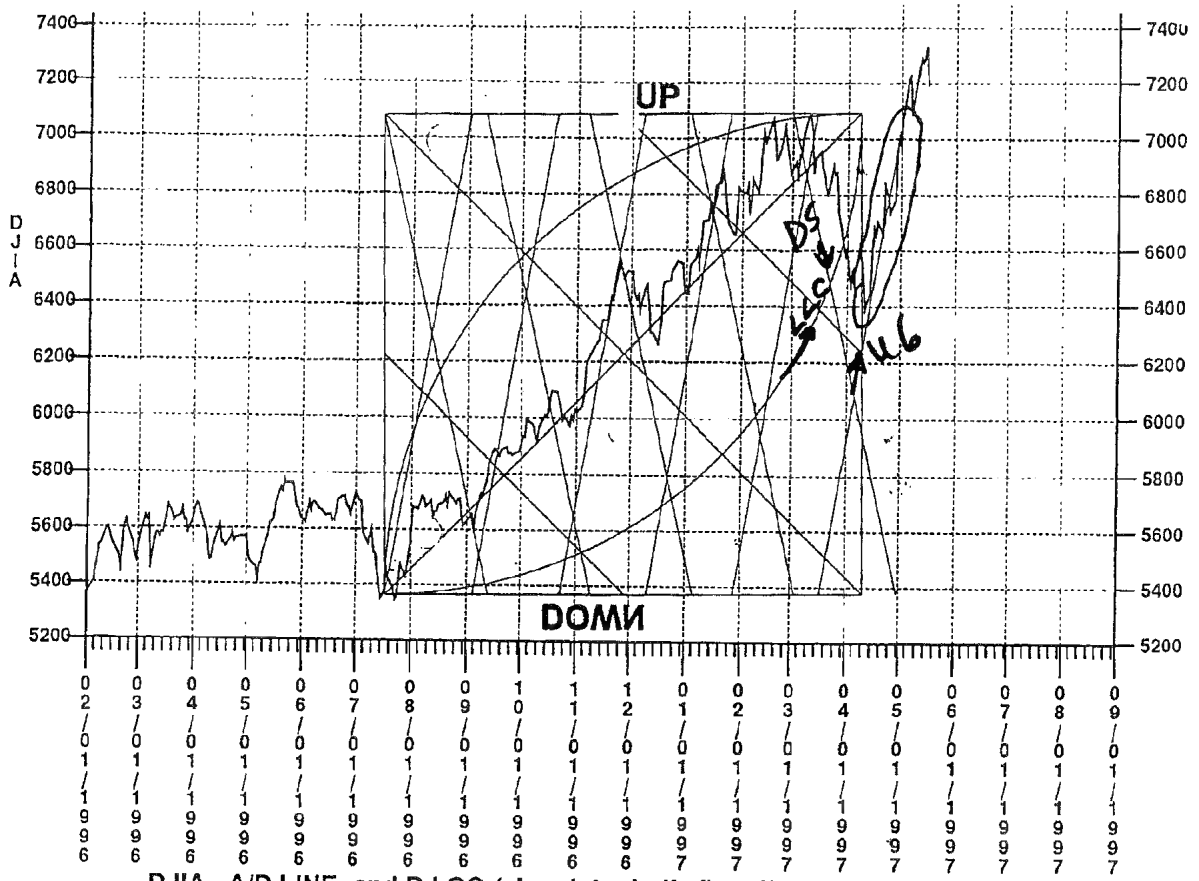
DJIA , A/D LINE, and DJ.GO (alpsplot <dodjad) 3/14/1997
Figure 83.

beautiful 45 degree support line under prices. It looked like the market would top in early April.

Figure 84 shows what actually happened. This fractal suffered an early termination failure as prices dropped along D5, broke the lower limit cycle, and then rallied sharply along U6. All this is shows in Figure 84, but where do we go from there?

Prices rallied back up well above the end of the fractal pattern shown. Do we adjust the scale or do we adjust the size of the fractal? I have no general guidelines. Sometimes one must try both, but let me talk about adjusting the size of the fractal.

Fractals tend to form fractals within fractals. This is one of the great complexities of



DJIA , A/D LINE, and DJ.GO (alpsplot <dodjad) 5/16/1997

Figure 84.

markets. So you have to keep working.

Look at Figure 85. Here I have used a larger fractal that accounts for the sharp rally as a rally off of the lower limit cycle back up to the line of central tendency.

Fractals tend to exhibit this expansion behavior in long bull or bear markets. The original fractal U6 or D6 provides the energy for the larger size fractal move 7. The moral of this story is, "It ain't over 'til its over."

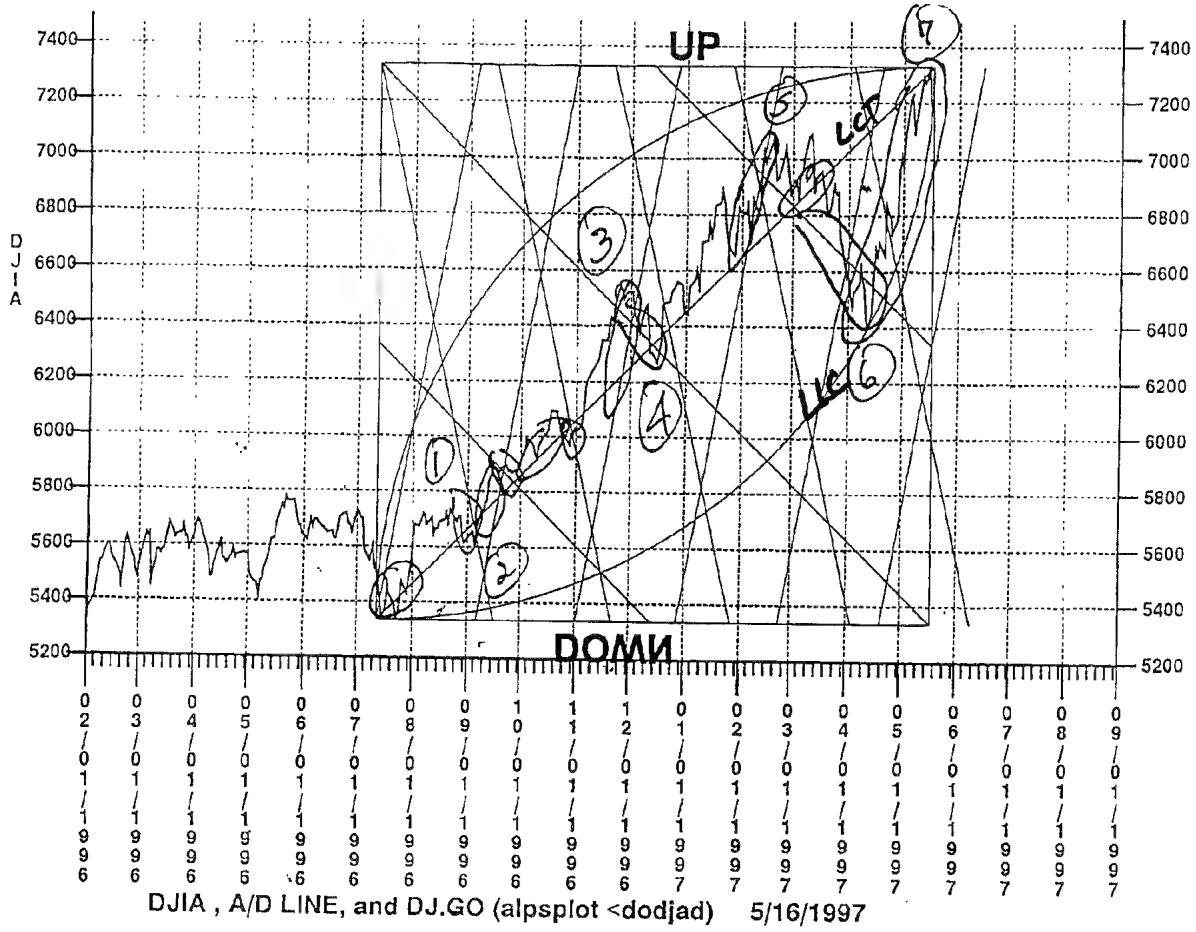


Figure 85.

Let's look at another example of scaling. Figure 86 shows a multiyear chart of Tbonds with an eight year fractal pattern. An eight year cycle is very common in markets because every eight years the planet Venus returns to exactly the same position in the heavens. This eight year pattern is, of course, divided into eight harmonic parts by our calendar year.

The fractal shown in Figure 86 is fairly well formed until it broke out of the side in 1989.

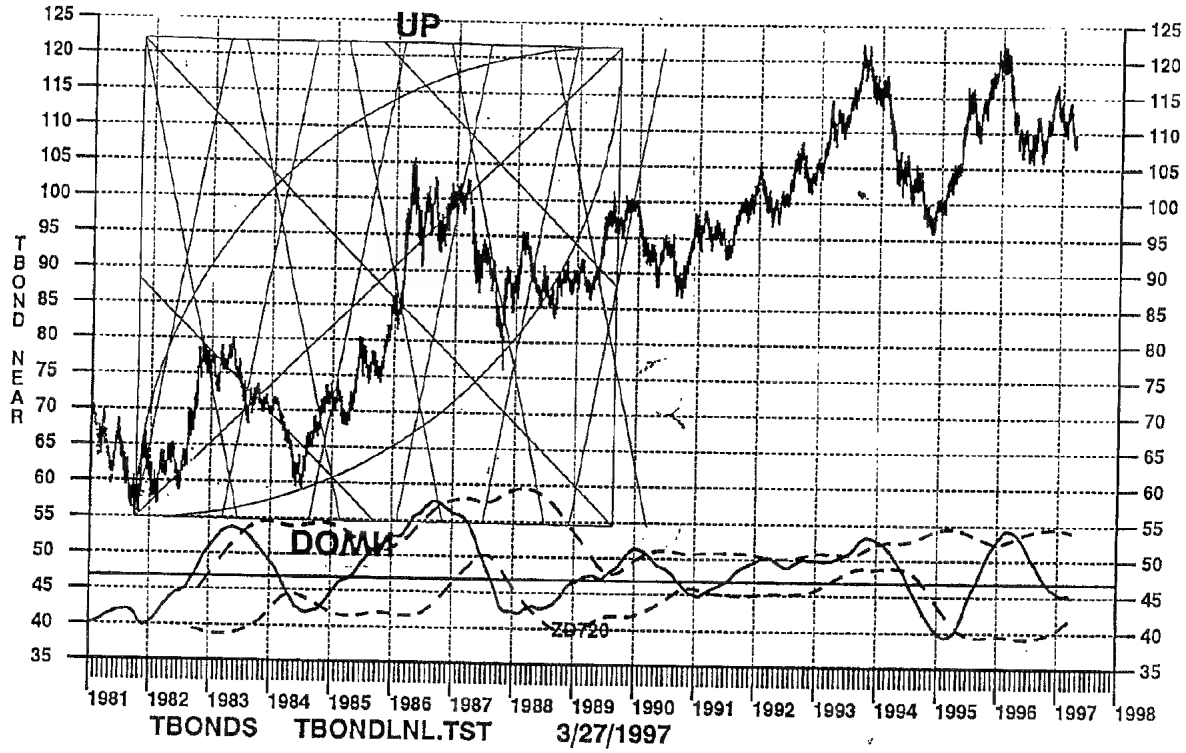


Figure 86.

In searching for a new fractal pattern one could slide the fractal pattern sideward as shown in Figure 87. This again provides a fit with the streaks and a tool for identifying the high in 1993. But is sliding the fractal sideways the proper technique?

It is a good technique if it finds the streaks, but it may not be the complete picture. The zero delay filter, shown below, shows seven moves occupying an eleven year period. This suggests that perhaps an eleven year cycle is also at work in Tbonds. Perhaps the time scale needs to be adjusted to make eleven years of time a square.

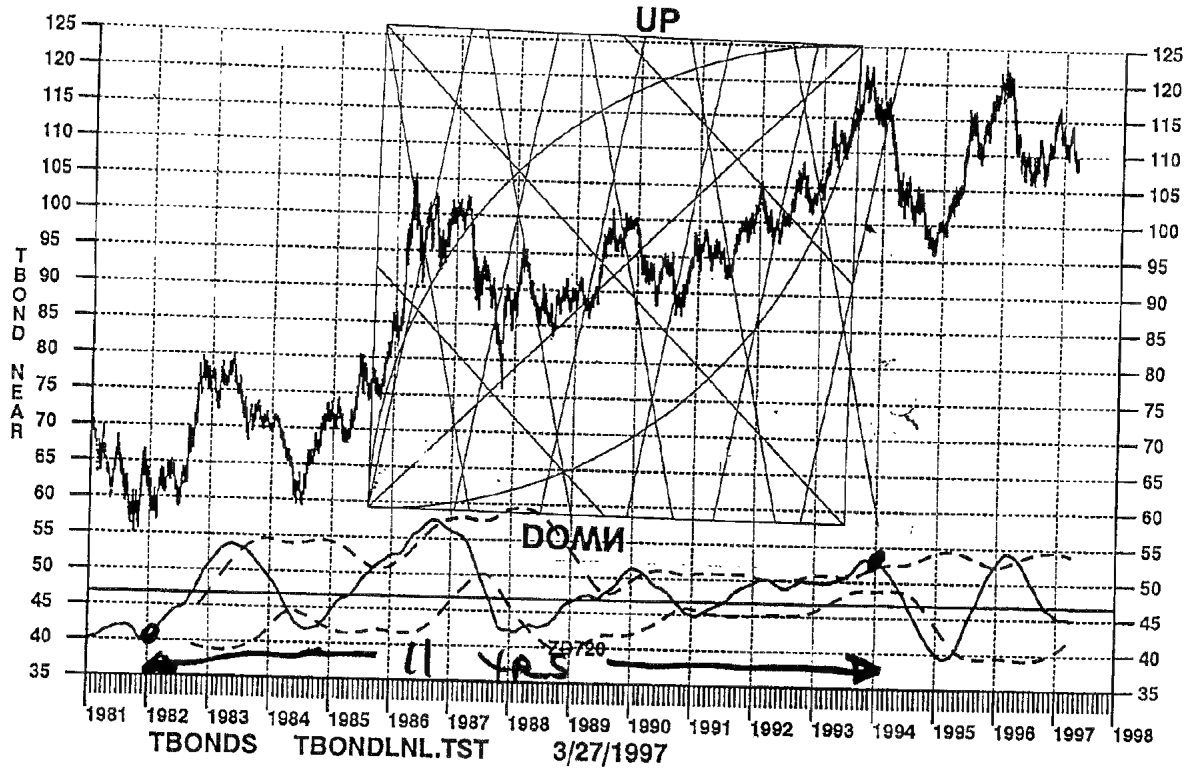


Figure 87.

This is done and shown in Figure 88. Again notice how the ***Fractal of Pi*** pattern is being followed. What is occurring here is that both the eight year cycle and the eleven year cycle are at work in bonds.

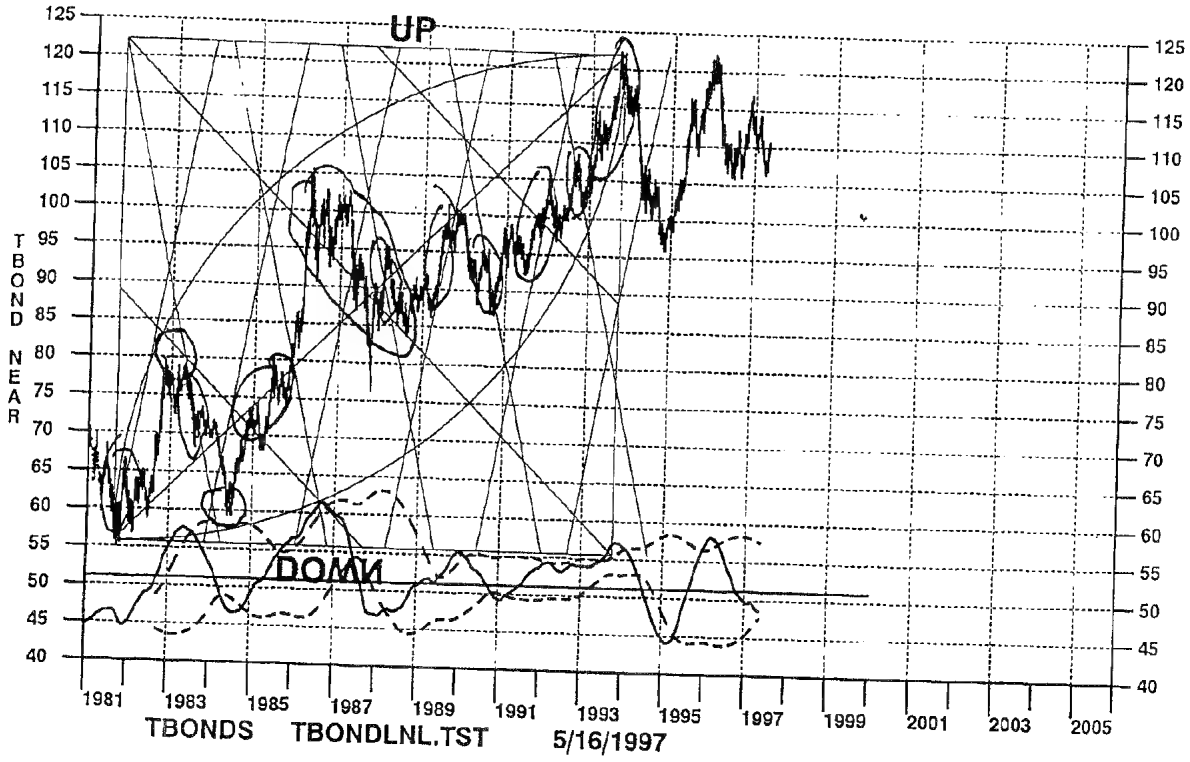


Figure 88.

I warned you that a fractal pattern only looked at interference between two cycles. Markets, in reality, are responding to multiple cycles at the same time. It is a tough problem. It is a problem that has never been solved before. Thousands have tried and failed. I have spent a lot of time searching for the answers. The ***Fractal of Pi*** is a tool to give some of those answers.

One has to deal with the complexity of real markets and real time. Scaling is one of the techniques that you must master to do that. Hopefully, this chapter has given you some guidance on scaling and will help you apply the ***Fractal of Pi*** profitably.

This course includes mylar overlays which you can lay over your charts or your computer screen to identify ***Fractal of Pi*** patterns. Several different sizes of these overlays are provided to cover average size fractals. Now that you have seen the ***Fractal of Pi*** pattern, you have some homework.

Before you risk a single penny on any trade with the ***Fractal of Pi*** pattern, study at least, 50 fractals. Take 30 of them from historical charts. Take 20 of them as they occur going forward in real time. Then paper trade where to put your stops. After you have finished this homework assignment, you should be able to recognize the ***Fractal of Pi*** pattern and understand how to use it to place your stops in any market.

This, of course, will not assure you of success but will certainly tilt the balance in your favor. To succeed in markets you need knowledge, discipline, persistence, and patience.

Conclusion

Well, now you have it. You have seen how the ***Fractal of Pi*** is formed in the electric fields that control markets and traders. You have seen how the eleventh and fourteenth harmonics work within the ***Fractal of Pi*** to form the streaks. ***The streaks are the gold nuggets of trading. Finding them can make a big different in your life.***

I'll end this book with one more trading example. Figure 89 shows a downgoing ***Fractal of Pi*** which I recognized during the day of March 4, 1997.

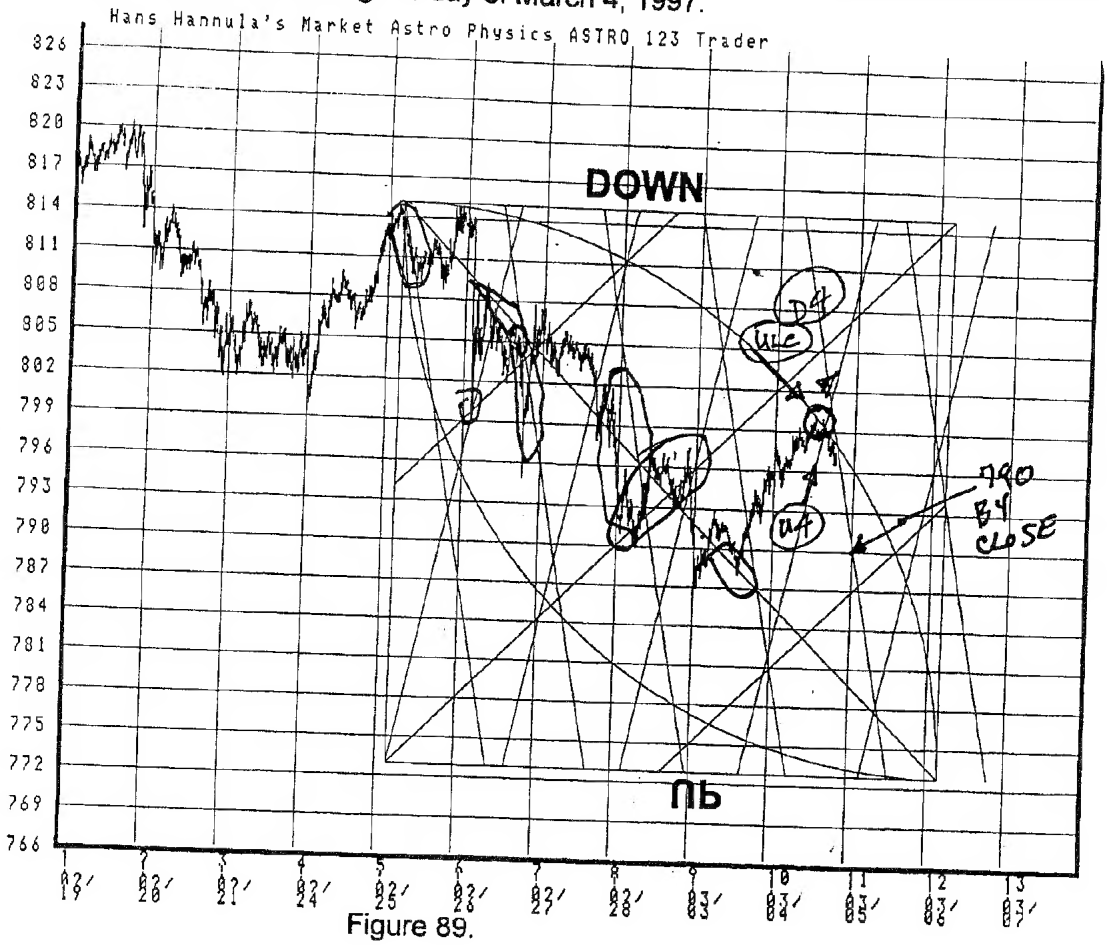


Figure 89.

The market seemed to be following a seven day pattern that had rallied up to be stopped at the intersection of U4, D4, and ULC. If prices followed the streak D4, they would reach 790 by the close. This looked like a good opportunity to make a "quick pick."

Figure 90 shows the results. I initially sold on a stop at 798 even. As the market moved, I pressed that stop down only to be stopped out at 797.90.

I waited just a bit to see if prices would continue to fall and follow the streak. They looked like they would. I then placed a stop and sold again at 794.50.

Expecting prices to reach 790 by the close, I immediately covered at the market when they did so, buying at 790.90. With less than an hour's work, I had made 3.6 points, or $1,800 before commission.

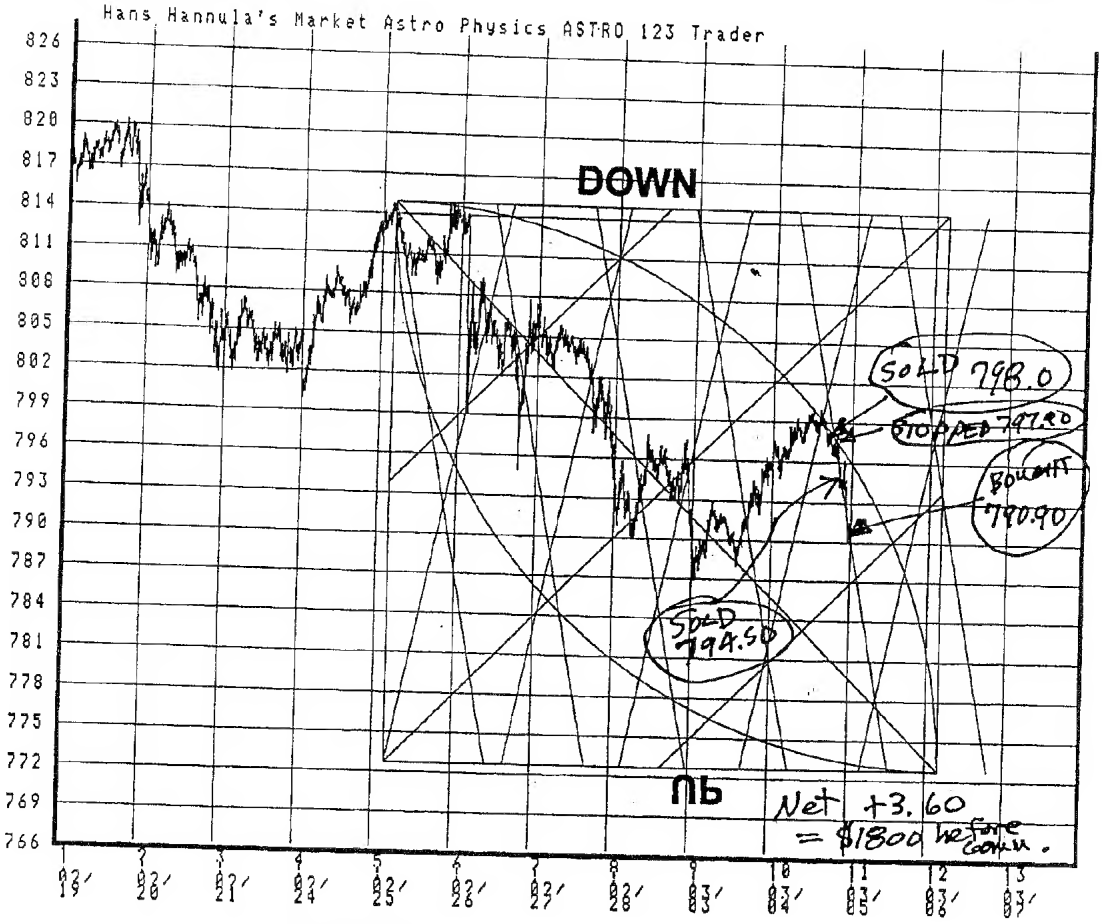


Figure 90.

I had a clear pattern. I had disciplined execution. I took very little risk. I cashed in at a natural limit. I did things well. I had knowledge, persistence, patience, and disciple in my favor. I ***Cashed In On Chaos. You can too.***

Note here that, being a died in the wool day trader, I did not carry my position over night. Of course, the market could have followed this streak down to 773 the next day, but if it does, it will probably meet support on QB2. I can then determine if I want to get in.

I limit my exposure to situations over which I have complete control. Carrying a position overnight surrenders control to the whims of the overnight market. I don't like to play that game. I suggest that you consider not playing it, as well. At any rate, I just wanted to

show you how easy it can be to ***Cash In On Chaos*** when you are in full mastery of your knowledge of markets and your knowledge of self and you execute well.

If you are patient, persistent, diligent, and disciplined, you can use the ***Fractal of Pi*** to buy or sell many streaks over the coming years. If you use good money management, the ***Fractal of Pi*** will help you ***Cash In On Chaos***. I sincerely hope you do. I have, and I can tell you, it is a thrill to be totally, completely free - financially free.

Happy Trading!